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ABSTRACT

This teaching, guide for a high school nutrition and food science course, includes introductory information about the course, course design, facilities and equipment, Future Homemakers of America, and use of the guide. The course addresses nutrition and food science from the perspective of food habits and wellness; menu planning; special dietary needs; food costs and budgeting; consumer food-buying strategies; food safety and sanitation procedures; food labels; technology implications; and food handling, storage, and preparation practices. The guide's introductory section is followed by a list of the Texas Essential Knowledge and Skills (TEKS) for Home Economics Education and a section that provides suggestions for teaching the course in a block plan. The fourth section provides instructional strategies for teaching the TEKS in nutrition and food science, while the sections thereafter provide an overview of supervised career-connections experiences, blended activities, creative ideas for teaching the course, and 119 teaching aids keyed to the TEKS. (Contains 60 references.) (KC)

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Nutrition and Food Science

Teacher's Instructional Guide

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Course Description

Nutrition and Food Science (NU&FDSCI)

Recommended Grade Placement: 10-12

Recommended Prerequisite: None

12204210

Credit: 1/2

This technical laboratory course concentrates on nutrition, food choices, and food management skills for individuals and the family throughout the life cycle. Instruction addresses nutrition and food science from the perspective of food habits and wellness; menu planning; special dietary needs; food costs and budgeting; consumer food-buying strategies; food safety and sanitation procedures; food labels; technology implications; and food handling, storage, and preparation practices. Meal etiquette, career options, and techniques for managing multiple family, community, and career roles are part of the content.

Overview of Course Design

The process of developing the essential knowledge and skills focused on bringing all Home Economics content up-to-date in reflecting cultural, societal, demographic, economic, and technological changes. Further, in order to accommodate the content additions and redirections necessary to achieve relevance, constraints on instructional time forced dropping content that, while "nice to know" is not "absolutely essential" in today's society. Following are examples of these and other new directions/emphases not evident in the above description of this course:

Nutrition and Food Science:

- focuses on nutrition (reflected in both the name and the content)
- focuses on the relationship of nutrition and stress
- focuses on legislation and public policies pertaining to nutrition and health
- focuses on food allergies and intolerance
- focuses on nutritive supplements
- focuses on nutrition assessment data from technology applications
- focuses on decision-making skills to improve management of eating habits, exercise, and weight
- focuses on peer, media, psychological, and social influences on food choices
- focuses on appropriate use of fast foods and convenience food items in maintaining quality nutrition
- focuses on recipe adjustments to improve nutritional quality
- focuses on food safety, sanitation, and storage
- focuses on the effects of agriculture and technology on food choices
- focuses on technological advancements impacting the nutritional value of food and food preparation
- focuses on verbal, nonverbal, written, and electronic communication skills
- focuses on leadership and teamwork in preparation for adult roles
- focuses on promoting an appreciation and understanding of cultural diversity
- focuses on career options, preparation requirements, and management practices
- focuses on application of school-based learning in family, community, and career settings

Facilities, Equipment, and Resources

This technical course utilizes a fully equipped, state-of-the-art content laboratory arrangement that accommodates development of Nutrition and Food Science essential knowledge and skills through locally selected instructional strategies. Although textbooks previously used for the Food Science and Nutrition course are available, they are dated and inadequate. Utilization of a rich variety of up-to-date resources and technologies, including computers, software, and the information super highway, and hands-on laboratory experiences are critical for enriched instructional effectiveness, relevance, and retention.

Future Homemakers of America

Future Homemakers of America activities can be most effectively structured to serve as one of the many methods of instruction used in the classroom (i.e., independent study, group work, role play, questioning). As a method of instruction, activities of the organization reflecting specific home economics content are incorporated into the Nutrition and Food Science course. Chapter activities need to be designed to accommodate chapter projects, community needs, and the desires of the students involved.

FHA/HERO activities are included as integral parts of instruction within several components of this instructional guide. Each instance is denoted by the Future Homemakers of America emblem in the margin.

- **Instructional Strategies** – FHA/HERO activities are written into the individual strategy when the project or program is an integral part of that specific learning experience.
- **Instructional Strategies** – Suggested FHA/HERO activities are provided in a box at the end of the numbered set of strategies to generate additional ideas for projects and programs that are relevant to the overall Texas Essential Knowledge and Skills (TEKS) statement, but not tied to a specific strategy.
- **Supervised Career-connections Experiences** – Throughout the course, FHA/HERO projects and programs are suggested that, depending on depth and extent, could constitute a supervised career-connections experience.
- **Blended Activities** – A separate page has been included in this section to provide ideas for FHA/HERO projects and programs that address multiple Texas Essential Knowledge and Skills.

As a method of instruction rather than the sole point of instruction, Future Homemakers of America programs and projects will be present in instruction but not itemized in block plans. A chapter's organizational structure and the teacher's approach to utilizing the organization as a method of delivering course content will influence whether to have chapter activities once a week, once a month, or have some activity related to the content filtered into the curriculum on a more regular basis.

Resources available from the organization's national headquarters to assist with starting a chapter and integrating it into the curriculum are the *Co-Curricular Guide* and *FHA/HERO Handbook*. Additional national resources helpful to Nutrition and Food Science teachers and students include handbooks for the various national programs, such as *Student Body*, *Power of One*, *FHA/HERO Career Connection*, and *Leaders at Work*.

How to Use the Instructional Guide

You will be able to utilize the *Nutrition and Food Science Teacher's Instructional Guide* most effectively if you first understand all components and how they work together. Read through the Table of Contents and familiarize yourself with the various components of the instructional guide. Following are descriptions and suggestions for utilizing components within each section to maximize instructional effectiveness.

INTRODUCTION

Read the Introduction for information specific to the course on

- Course Description
- Overview of Course Design
- Facilities, Equipment, and Resources
- Future Homemakers of America

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS (TEKS) FOR HOME ECONOMICS EDUCATION

Familiarize yourself with the TEKS for Nutrition and Food Science. A copy of the Texas Administrative Code, Chapter 122.42, is provided in this document for your convenience.

The Texas Essential Knowledge and Skills are presented in a two-column format. In the left column are the numbered general knowledge and skills statements, (i.e., (1), (2), (3)). In the right column are the related statements of expected student performance, sometimes referred to as knowledge and skills expectations (i.e., (A), (B), (C)). Two pages have been allotted in the **Instructional Strategies** section for instructional strategies addressing each statement of expected student performance. Additional strategies that simultaneously address multiple statements of expected student performance are included in the **Supervised Career-connections Experiences** and **Blended Activities** sections of the instructional guide.

BLOCK PLANS

The block plans are included strictly as one example of how each course might be carried out in the available instructional time. It is intended that the block plans will serve only as an aid to teachers in planning instruction for the Texas Essential Knowledge and Skills for the course.

There will be many instances where time allotments as shown on the block plans will vary from time allotments as planned in your classroom. Factors impacting actual allotment include class size, length of class period, the school calendar, and local district policies. Also, time allotment will vary according to selected instructional strategies and the degree of emphasis placed on specific strategies and TEKS.

Local districts are encouraged to use the blank block forms found in this section to customize plans to accommodate other scheduling arrangements or to otherwise meet individual needs.

INSTRUCTIONAL STRATEGIES

Several instructional strategies are provided for each statement of expected student performance. It is not expected that you would use all strategies, but that you would select from the options those that best meet the needs of your students.

One of your greatest challenges in teaching the new TEKS is that of providing students with updated content information. Information changes so rapidly, and sources of information are so varied, that it is inappropriate and virtually impossible for the instructional guide to narrowly define much of the actual content. While some instructional strategies have built in obvious sources of information input, it is important for you to consciously seek and provide sources of information for each knowledge and skills expectation. The *Teacher's Instructional Guide* provides direction for resources and some background information sheets for both student and teacher use. Keeping abreast of content information can be accomplished through professional development, curriculum resources, professional organizations, and personal study. It is vital for all teachers continually to bring course content up-to-date.

The most important consideration is that students be enabled to meet each knowledge and skills expectation. Ask yourself continually, "How can I provide instruction so that students will know and be able to do what is expected?" As you analyze the student expectation provided in the shaded box at the top of each set of strategies, be sure to put that statement in the context of the general knowledge and skills statement.

For example, TEKS 1A states: The student is expected to define commonly used terms related to nutrition, health, and wellness. Remember that TEKS 1A through 1E all fall under TEKS 1: The student utilizes information about the basic principles of nutrition to promote healthy food choices.

To help you frame this important connection, twelve divider pages have been inserted within the instructional strategies – one before each new numbered TEKS statement.

The **Instructional Strategies** section has been designed to teacher specifications – to facilitate ease of use and to provide as much needed information as possible. The following aids have been built into the format.

Notes Column

The Notes column on the outside of each page was designed to provide space for your own notes and to display information and icons that point out the following:

- where Teaching Aids provided in the guide have been used within the strategies
- strategies which correlate with exit level TAAS objectives and academic principles for reading, writing, mathematics, science, and social studies
- strategies that utilize technology applications
- opportunities for integration of FHA/HERO programs and projects within specific strategies

TA 1 The Management Process

TAAS
WRITING



Strategy Headers

Each instructional strategy has been given a number and header designation so that you can easily locate and reference specific strategies and tell at a glance what general methodology is involved. In addition, the light bulb icon beside a header indicates that creative techniques related to the methodology are suggested in the **Creative Ideas** section.

Following are examples of headers used, with brief explanations or comments where titles may not be self-explanatory. The **Creative Ideas** section provides elaboration on many of these techniques.

- **AUDIOTAPE**
- **BRAINSTORMING** (see the Creative Ideas section)
- **CASE STUDY** (see the Creative Ideas section)
- **CLASS DISCUSSION**
- **DEBATE** (see the Creative Ideas section)
- **DEMONSTRATION**
- **EDUCATIONAL TOUR**
- **GAME** (see the Creative Ideas section)
- **GROUP ACTIVITY** (see the Creative Ideas section)
- **GUEST SPEAKER** (see the Creative Ideas section)
- **INDIVIDUAL ACTIVITY**
- **INTERNET SEARCH/ACTIVITY** (see the Creative Ideas section)
- **INTERVIEW**
- **LABORATORY EXPERIENCE**
- **OBSERVATION**
- **ORAL PRESENTATION** (see the Creative Ideas section)
- **PANEL DISCUSSION** (see the Creative Ideas section)
- **PROBLEM SOLVING**
- **PROJECT**
- **RESEARCH** – The header usually designates the systematic search for and collection of information about a particular subject, although some activities may involve more extensive research methods or more formal research projects.
- **ROLE PLAY**
- **SCENARIO** (see the Creative Ideas section)
- **SKIT**
- **SURVEY**
- **SYMPOSIUM** – In a symposium format, several persons present short, prepared speeches to a group on various aspects of a topic. Members of the group may ask questions after presentations are made. For example, three or four students research a particular topic and present information to the class; class members then dialogue with the presenters through questioning following the presentation.
- **TEAMWORK** (see the Creative Ideas section)
- **VIDEOTAPE** – Few videotapes are referenced by name other than those available from the Home Economics Curriculum Center; these are suggested as samples because they have been previewed for content and appropriateness. Teachers are encouraged to utilize additional videotapes they have personally previewed for appropriateness.
- **VISUAL DISPLAY** (see the Creative Ideas section)
- **WRITTEN EXERCISE**

Resources

Space is provided at the end of each set of strategies for resources pertinent to each knowledge and skills expectation. Specific books, periodicals, agencies and organizations, videotapes, and Web sites are often listed, and space is provided for you to list additional resources.

A complete bibliography of all resources is provided under the tabbed divider, **Resources**.

SUPERVISED CAREER-CONNECTIONS EXPERIENCES

Examples of career-connections experiences for students enrolled in the Nutrition and Food Science course are provided. The “Note to the Teacher” on the introductory page to this section provides additional information about supervised career-connections experiences. Teaching Aid 119, **Activity Assessment**, has been provided as an example of an assessment tool for experiences such as these.

BLENDED ACTIVITIES

Blended activities are teaching and learning strategies that encompass several knowledge and skills expectations. These activities promote student learning of multiple TEKS simultaneously through hands-on, project-based, and/or problem-solving activities.

Blended activities provide extension and application of the basic knowledge and skills developed in strategies that address each individual student expectation. Some also serve as a means of authentic assessment. Teaching Aid 119, **Activity Assessment**, is also appropriate for many blended activities.

Included in the **Blended Activities** section are suggestions for FHA/HERO projects and programs that address multiple knowledge and skills expectations.

CREATIVE IDEAS

The rationale for this section, and guidelines for use, are provided on the section introductory page. Please read the **Creative Ideas** section! It provides many ideas for promoting active learning, as well as suggestions for saving teacher time and enhancing student learning and skills development.

TAAS OBJECTIVES AND PROFICIENCY

In response to teacher requests, a tabbed divider has been provided as a placeholder for filing updated TAAS objectives. This convenience, along with the icons for reading, writing, mathematics, science, and social studies in the Notes column of Instructional Strategy pages, will help you reinforce important academic concepts related to Nutrition and Food Science content.

RESOURCES

The resource section includes a bibliography of resource ideas generated by writers and reviewers of the document. Resources, which are listed alphabetically, include books, periodicals, agencies and organizations, videotapes, and Web sites.

A separate divider/section has been provided so you can add additional resources that you locate or obtain through professional development sessions.

TEACHING AIDS

In response to popular demand, teaching aids include transparency masters, student information sheets, activity sheets, assessment devices, and other tools to facilitate instruction (and save teacher development time!).

Chapter 122. Texas Essential Knowledge and Skills for Home Economics Education

Subchapter E. Nutrition and Wellness, Food Science and Technology; High School

Statutory Authority: The provisions of this Subchapter E issued under the Texas Education Code, §28.002, unless otherwise noted.

§122.41. Implementation of Texas Essential Knowledge and Skills for Home Economics Education, Nutrition and Wellness, Food Science and Technology; High School.

The provisions of Chapter 122, Subchapters B-K, shall supersede §75.83 of this title (relating to Vocational Home Economics) beginning September 1, 1998.

Source: The provisions of this §122.41 adopted to be effective September 1, 1998, 22 TexReg 5031.

§122.42. Nutrition and Food Science (One-Half Credit).

- (a) General requirements. This technical laboratory course is recommended for students in Grades 10-12.
- (b) Introduction. Principles of food science, technology, and nutrition are interdependent with growth, development, health, and wellness. Individuals utilize these principles to make informed choices, promote good health, and pursue careers related to food science, technology, and nutrition.

(c) Knowledge and skills.

- (1) **Principles of nutrition.** The student utilizes information about the basic principles of nutrition to promote healthy food choices.

The student is expected to:

- (A) define commonly used terms related to nutrition, health, and wellness;
- (B) identify the nutrients, their functions, and food sources;
- (C) compare the nutritive value of various foods;
- (D) describe effects of nutritional intake on health, appearance, effective job performance, and personal life; and
- (E) explain the relationship of activity levels and calorie intake to health and wellness, including weight management.

- (2) **Principles of nutrition.** The student determines the relationship of nutrition to individual and family health.

The student is expected to:

- (A) outline strategies for prevention, treatment, and management of diet-related diseases and eating disorders;
- (B) explain the relationship of nutrition and stress;

- (3) **Nutritionally-balanced diets.**
The student utilizes various dietary guidelines in making wise food choices.

- (4) **Nutritionally-balanced diets.**
The student analyzes nutritional adequacy of selected diets utilizing available technology.

- (5) **Influences on food choices.** The student evaluates influences on food choices.

- (C) summarize local, state, and federal legislation and policies pertaining to nutrition and health;
- (D) assess long-term effects of food choices; and
- (E) discuss food allergies and intolerances.

The student is expected to:

- (A) explain the food pyramid and various dietary guidelines;
- (B) compare recommended dietary allowances (RDA) throughout the life cycle;
- (C) set goals for good eating habits; and
- (D) apply dietary guidelines to meet nutritional needs throughout the life cycle.

The student is expected to:

- (A) analyze the reliability of nutrition information;
- (B) evaluate nutritive supplements;
- (C) assess nutritional needs of persons at various activity levels;
- (D) use available technology to compare personal food intake to recommended guidelines;
- (E) interpret nutrition assessment data from available technology; and
- (F) utilize decision-making skills to improve eating habits, exercise, and management of optimum weight.

The student is expected to:

- (A) identify ways food satisfies psychological and social needs;
- (B) discuss the role peer pressure and media play in food selections;
- (C) describe family eating patterns;
- (D) compare past, current, and future family eating patterns;
- (E) determine environmental influences on food choices;

- (6) **Influences on food choices.** The student exhibits an awareness of the variety of food choices available in our multicultural society.

- (7) **Food management skills.** The student applies management principles in meeting nutritional needs.

- (8) **Food management skills.** The student demonstrates safety and sanitation procedures.

- (F) propose ways nutritional needs may be met by individuals in self-care, including children, older adults, and persons with special needs; and
- (G) evaluate the most efficient use of fast foods and convenience foods as nutrition sources.

The student is expected to:

- (A) analyze food customs of the community;
- (B) explain the integral role food plays in family traditions, special occasions, religious events, and holiday celebrations;
- (C) adjust traditional recipes to improve nutritional quality; and
- (D) determine the effects of regional agriculture and technology on food choices.

The student is expected to:

- (A) describe a variety of consumer food-buying strategies;
- (B) analyze the influence of advertising on consumer buying;
- (C) read and interpret food labels;
- (D) relate the effects of work space, tools, equipment, and technology on food preparation;
- (E) determine ways family members assuming multiple roles can apply food management skills;
- (F) analyze food costs and budgeting needs;
- (G) design a variety of daily menus; and
- (H) determine how technological advancements have impacted the nutritional value of foods.

The student is expected to:

- (A) identify potential safety and sanitation hazards;
- (B) demonstrate safe and sanitary practices in the use, care, and storage of tools and equipment;

- (9) **Food management skills.** The student prepares and serves nutritious foods.
- (C) describe food storage principles; and
 - (D) demonstrate safety and sanitation practices when handling, storing, preparing, and serving food.
- The student is expected to:
- (A) demonstrate skills and procedures in applying principles of food preparation;
 - (B) prepare nutritious foods appropriate for individuals, families, and small groups;
 - (C) practice etiquette, food presentation, and table service appropriate for specific situations; and
 - (D) participate as an effective team member by demonstrating cooperation and responsibility.
- (10) **Career preparation.** The student determines opportunities and preparation requirements for careers in nutrition and the food industry.
- The student is expected to:
- (A) determine employment and entrepreneurial opportunities and preparation requirements for careers in the nutrition and the food industry;
 - (B) compare personal characteristics to those needed for careers in nutrition and the food industry; and
 - (C) propose short-term and long-term career goals.
- (11) **Career preparation.** The student exhibits employability skills.
- The student is expected to:
- (A) describe management practices facilitating individuals assuming multiple family, community, and wage-earner roles;
 - (B) practice positive human-relations skills;
 - (C) demonstrate effective verbal, nonverbal, written, and electronic communication skills;
 - (D) demonstrate effective techniques to secure, maintain, and terminate employment;
 - (E) identify ethical practices in the workplace; and

- (12) **Career preparation.** The student completes a supervised career-connections experience applying knowledge and skills developed in the study of nutrition and food science.

- (F) practice problem solving using leadership and teamwork skills.

The student is expected to:

- (A) determine home and business applications of knowledge and skills developed in the study of nutrition and food science; and
- (B) utilize a career-connections experience to demonstrate occupational applications of competencies developed in the study of nutrition and food science.

Explanation of Block Plans

NOTE TO THE TEACHER

The block plans are included strictly as one example of how each course might be carried out in the available instructional time. It is intended that the block plans will serve only as an aid to teachers in planning instruction for the Texas Essential Knowledge and Skills for the course.

There will be many instances where time allotments as shown on the block plans will vary from time allotments as planned in your classroom. Factors impacting actual allotment include class size, length of class period, the school calendar, and local district policies. Also, time allotment will vary according to selected instructional strategies and the degree of emphasis placed on specific strategies and TEKS.

Local districts are encouraged to use the blank block forms found in this section to customize plans to accommodate other scheduling arrangements or to otherwise meet individual needs.

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Nutrition and Food Science

Sample 1st Six Weeks Plan 55 minute periods

* EKS #8, 9, and 11B, 11C, & 11F are reinforced through the laboratory experiences that are integrated throughout this course.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Course Introduction 12A & B Introduction to career-connections experiences	EKS #1: Basic Principles of Nutrition 1D Effects of nutritional intake on health, appearance, effective job performance, and personal life		1A Terms related to nutrition, health, and wellness	
Week 2	1B Nutrients, their functions, and food sources	→		1C Nutritive value of various foods	
Week 3	1E Relationship of activity levels and calorie intake 4C Nutritional needs of persons at various activity levels	EKS #2 Relationship of Nutrition to Individual and Family Health 2A Diet-related diseases and eating disorders			2B Relationship of nutrition and stress 2C Legislation and policies pertaining to nutrition and health
Week 4	2D Long-term effects of food choices		2E Food allergies and intolerances	EKS #8 Safety and Sanitation Procedures 8A Potential safety and sanitation hazards 8B Use, care, and storage of tools and equipment	
Week 5	8A Continued 8B Continued	8C Food storage principles 8D Handling, storing, preparing, and serving food		EKS #9 Preparation and Service of Nutritious Foods Begin 9A-D, 11B →	
Week 6	9A Principles of food preparation 9B Nutritious foods appropriate for individuals, families, and small groups 9C Etiquette, food presentation, and table service appropriate for specific situations 9D Effective team member cooperation and responsibility 11B Human-relation skills			Review	Test

Nutrition and Food Science

Sample 2nd Six Weeks Plan 55 minute periods

* EKS#8, 9, and 11B, 11C, & 11F are reinforced through the laboratory experiences that are integrated throughout the course.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	EKS #3 Dietary Guidelines 3A Food pyramid and various dietary guidelines 3C Goals for good eating habits		3B RDA throughout the life cycle 3D Application of dietary guidelines throughout the life cycle		
Week 2	3B Continued 3D Continued	EKS #4 Nutritional Adequacy of Selected Diets 4A Reliability of nutrition information	4B Nutritive supplements	4D Using technology to compare personal food intake to recommended guidelines 4E Interpreting nutrition assessment data 4F Decision-making skills to improve eating habits, exercise, and weight management	
Week 3	4D <input type="checkbox"/> 4E <input type="checkbox"/> 4F <input type="checkbox"/>			EKS #5 Influences on Food Choices 5A Psychological and social needs	5B Roles of peer pressure and media 5E Environmental influences on food choices
Week 4	5C Family eating patterns 5D Past, current, and future family eating patterns		5F Ways nutritional needs may be met by individuals in self-care		5G Fast foods and convenience foods as nutrition sources
Week 5	5G Continued	EKS #6 Food Choices 6A Food customs of the community	6B Role of food in family traditions, special occasions, religious events, and holidays		6C Adjustments of traditional recipes to improve nutritional quality
Week 6	6C Continued		6D Effects of regional agriculture and technology on food choices	Review	Test

Nutrition and Food Science

Sample 3rd Six Weeks Plan 55 minute periods

* EKS#8, 9, and 11B, 11C, & 11F are reinforced through the laboratory experiences that are integrated throughout this course.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	EKS #7 Management Principles in Meeting Nutritional Needs 7A Food-buying strategies —————> 7B Influence of advertising on consumer buying —————> 7F Food costs and budgeting needs				7C Food labels 7H Impact of technological advancements on the nutritional value of foods
Week 2	7C Continued 7H Continued	7D Effects of work space, tools, equipment, and technology on food preparation			
Week 3	7E Ways family members assuming multiple roles can apply food management skills —————> 7G Variety of daily menus —————>				
Week 4	EKS #10 Career Opportunities and Preparation Requirements 10A Employment and entrepreneurial opportunities and preparation requirements 10B Personal characteristics needed for careers in nutrition and the food industry 10C Short-term and long-term career goals			EKS #11 Employability Skills 11A Management practices facilitating individuals assuming multiple family, community, and wage-earner roles	
Week 5	11E Ethical practices in the workplace 11F Leadership and teamwork skills		11C Effective communication skills 11D Effective techniques to secure, maintain, and terminate employment		
Week 6	11C Continued 11D Continued	EKS #12 Career-Connections Experiences 12A & B Culmination of career-connections experiences		Review	Exam

Nutrition and Food Science

Sample 1st Six Weeks Plan 90 minute periods

* EKS #8, 9, and 11B, 11C, & 11F are reinforced through the laboratory experiences that are integrated throughout this course.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	Course Introduction 12A & B Introduction to career-connections experience		EKS #1: Basic Principles of Nutrition 1D Effects of nutritional intake on health, appearance, effective job performance, and personal life		1A Terms related to nutrition, health, and wellness
Week 2		1B Nutrients, their functions, and food sources		1C Nutritive value of various foods	
Week 3	1E Relationship of activity levels and calorie intake 4C Nutritional needs of persons at various activity levels		EKS #2 Relationship of Nutrition to Individual and Family Health 2A Diet-related diseases and eating disorders 2B Relationship of nutrition and stress		2A Continued 2C Legislation and policies pertaining to nutrition and health
Week 4		2D Long-term effects of food choices 2E Food allergies and intolerances		EKS #8 Safety and Sanitation Procedures 8A Safety and sanitary hazards 8B Use, care, and storage of tools and equipment 8C Food storage principles 8D Handling, storing, preparing, and serving food	
Week 5	8A 8B 8C 8D] Continued		EKS #9 Preparation and Service of Nutritious Foods 9A Principles of food preparation 9B Nutritious foods appropriate for individuals, families, and small groups 9C Etiquette, food presentation, and table service appropriate for specific situations 9D Effective team member cooperation and responsibility 11B Human-relation skills		
Week 6		9A 9B 9C 9D 11B] Continued		Review Test	

Nutrition and Food Science

Sample 2nd Six Weeks Plan 90 minute periods

* EKS #8, 9, and 11B, 11C, & 11F are reinforced through the laboratory experiences that are integrated throughout this course.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	EKS #3 Dietary Guidelines 3A Food pyramid and various dietary guidelines 3C Goals for good eating habits		3B RDA throughout the life cycle 3D Application of dietary guidelines throughout the life cycle		3B & D Continued
Week 2		EKS #4 Nutritional Adequacy of Selected Diets 4A Reliability of nutrition information 4B Nutritive supplements		4D Using technology to compare personal food intake to recommended guidelines 4E Interpreting nutrition assessment data 4F Decision-making skills to improve eating habits, exercise, and weight management	
Week 3	4D <input type="checkbox"/> 4E <input type="checkbox"/> 4F <input type="checkbox"/> Continued		EKS #5 Influences on Food Choices 5A Psychological and social needs 5B Roles of peer pressure and media 5E Environmental influences on food choices		5C Family eating patterns 5D Past, current, and future family eating patterns
Week 4		5F Ways nutritional needs may be met by individuals in self-care		5G Fast foods and convenience foods as nutrition sources	
Week 5	EKS #6 Food Choices 6A Food customs of the community 6D Effects of regional agriculture and technology on food choices		6D Continued 6B Role of food in family traditions, special occasions, religious events, and holidays		6B Continued 6C Adjustment of traditional recipes to improve nutritional quality
Week 6		6C Continued		Review Test	

Nutrition and Food Science

Sample 3rd Six Weeks Plan

90 minute periods

* EKS #8, 9, and 11B, 11C, & 11F are reinforced through the laboratory experiences that are integrated throughout this course.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	EKS #7 Management Principles in Meeting Nutritional Needs 7A Food-buying strategies 7B Influence of advertising on consumer buying 7F Food costs and budgeting needs				7C Food labels 7H Impact of technological advancements on nutritional value of foods
Week 2		7C Continued 7H Continued		7D Effects of work space, tools, equipment, and technology on food preparation	
Week 3	7D Continued 7E Ways family members assuming multiple roles can apply food management skills		7E Continued 7G Variety of daily menus		7E Continued 7G Continued
Week 4		EKS #10 Career Opportunities and Preparation Requirements 10A Employment and entrepreneurial opportunities and preparation requirements 10B Personal characteristics needed for careers in nutrition and the food industry 10C Short-term and long-term career goals			
Week 5	EKS #11 Employability Skills 11A Management practices facilitating individuals assuming multiple family, community, and wage-earner roles 11F Leadership and teamwork skills		11C Effective communication skills 11D Effective techniques to secure, maintain, and terminate employment 11E Ethical workplace practices		11C 11D 11E Continued
Week 6		EKS #12 Career-Connections Experiences 12A & B Culmination of career-connections experiences Review		Exam	

Sample Six Weeks Plan
55 minute periods

Six Weeks

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1					
Week 2					
Week 3					
Week 4					
Week 5					
Week 6					

Sample Six Weeks Plan
90 minute periods

Six Weeks

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1					
Week 2					
Week 3					
Week 4					
Week 5					
Week 6					

Nutrition and Food Science

Knowledge and Skills.

(1) Principles of nutrition.

The student utilizes information about the basic principles of nutrition to promote healthy food choices.

The student is expected to:

- (A) define commonly used terms related to nutrition, health, and wellness;
- (B) identify the nutrients, their functions, and food sources;
- (C) compare the nutritive value of various foods;
- (D) describe effects of nutritional intake on health, appearance, effective job performance, and personal life; and
- (E) explain the relationship of activity levels and calorie intake to health and wellness, including weight management.

1A - The student is expected to define commonly used terms related to nutrition, health, and wellness.

Strategies for integrating laboratory experiences in the Nutrition and Food Science course are presented throughout this instructional guide. Students need to learn concepts related to laboratory planning, safety, sanitation, management, and assessment prior to their first laboratory experience. TEKS 7, 8, and 9 focus on food management skills; therefore, many of the student expectations for these TEKS may need to be covered at the beginning of the semester as you introduce knowledge and skills needed for successful laboratory experiences. Information on planning and conducting laboratory experiences is found on Teaching Aids 98 - 101.

NOTES

1) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Using 3x5 note cards, write a common term related to nutrition, health, and wellness on each card creating as many cards as there are students in the class. The terms on Teaching Aid 1, ***Terms Related to Nutrition, Health, and Wellness***, could be used or you could select those most appropriate for your class. Have each student draw one card. Instruct students to use resources to define their assigned nutrition-related term, write the definition on the back of the card, and report their findings to the class. Use the student information as a springboard for a class discussion on the importance of knowing basic principles of nutrition in promoting individuals to make healthy food choices.

TA 1 *Terms Related to Nutrition, Health, and Wellness*

KEY QUESTIONS

- How is nutrition related to health and wellness?
- What is the relationship of nutritional health to mental and physical performance?
- Why is it important for individuals to know basic principles of nutrition?
- What role does nutrition play in adult life? Why?

For updated information on the RDA and the new Dietary Reference Intakes (DRI), please see Teaching Aid 35, ***What IS Reliable Nutrition Information?***

2) GAME



Use the terms prepared on the 3x5 cards (and/or others students have learned through reading or class discussion) as the subject matter for a game of "Jeopardy" to help students learn the terms and their defini-

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TA 2 *"Jeopardy" Game Instructions*

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TA 3 *Points to Ponder About Digestion*

TA 4 *Digestion Quiz*

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tions. See Teaching Aid 2, *"Jeopardy" Game Instructions*, for detailed instructions for the "Jeopardy" game.

3) CLASS DISCUSSION/WRITTEN EXERCISE

Distribute a copy of Teaching Aid 3, *Points to Ponder About Digestion*, to each student. Lead a class discussion on the process of digestion using the teaching aid as a reference. Have students complete Teaching Aid 4, *Digestion Quiz*. After all students have completed the quiz, review the correct responses and the discussion on digestion with the class.

Answer Key to *Digestion Quiz*:

1. digestion
2. saliva
3. ptyalin
4. esophagus
5. bile
6. duodenum
7. amino acids
8. glucose
9. fatty acids or glycerol
10. peristaltic waves

RESOURCES

BOOKS

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

WEB SITES

American Dietetic Association
www.eatright.org

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

1B- The student is expected to identify the nutrients, their functions, and food sources.

1) TEAMWORK/ORAL PRESENTATION



To introduce the unit on nutrients, have a student look up the word "limey" in the dictionary and share the definition with the class. Then have another student look in an encyclopedia for the story of why English sailors became known as "limeys". (See terms such as scurvy, vitamin C, or English sailors.) Follow up with a class discussion of the history of vitamin C and the scientist who discovered it.

Divide students into pairs or small groups. Have each group choose a 3x5 card that has the name of a nutrient on it:

- | | | |
|---------------------------|--------------|-------------|
| • Carbohydrates | • Vitamin D | • Calcium |
| • Protein | • Vitamin E | • Sodium |
| • Water | • Vitamin K | • Iron |
| • Fat | • Thiamin | • Iodine |
| • Vitamin A | • Riboflavin | • Magnesium |
| • Vitamin C | • Niacin | • Potassium |
| • Vitamin B ₁₂ | • Folate | |

Have students use computer software programs and other technology to create an advertisement for their nutrients. Have students use textbooks, nutrition sources, and Web sites such as the American Dietetic Association, to gather information on their nutrient regarding its functions in the body and food sources. Have students "sell" their nutrients to the class using their advertisement or a television commercial format.

Instruct students to record information on Teaching Aids 5a and 5b, **Nutrients**, as they observe the presentations by their classmates. Following the presentations, review the information on all the nutrients with the class.

2) CLASS DISCUSSION/BRAINSTORMING



Lead a class discussion on the functions of water in the human body. Ask students to define the term *dehydration*. Explain that all living things need water or they will die. Display a transparency of Teaching Aid 6, **Dehydration and the Human Body**. Discuss the effects of dehydration on humans and how humans lose water from their body.

KEY QUESTIONS

- Why is it so important to drink fluids?
- When might an individual weighing a hundred pounds begin to feel thirsty? an individual weighing 150 pounds?

NOTES

TA 5a & 5b
Nutrients

TAAS
READING



TA 6 **Dehydration
and the
Human Body**

SCIENCE

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NOTES

TAAS
READING

TAAS
MATH

TA 7a *Nutrients and
You*

TA 7b *Nutrients and
You Answer Key*

Lead students to brainstorm instances when people may not take in adequate amounts of fluid. Consider a marathon runner, someone working out in the hot sun, an older adult whose thirst sensation does not function as it did in years past, and an infant who has a bout with diarrhea or vomiting.

KEY QUESTION

- What are some guidelines that could be followed to ensure that individuals in these circumstances might take in adequate amounts of fluids?



3) CLASS DISCUSSION/GROUP ACTIVITY

Discuss with students the fact that foods contain varying amounts of vitamins. Divide the class into small groups. Assign each group a particular vitamin. Have student groups use their textbooks or other nutrition resources to research problems that result from a deficiency of their assigned vitamin. Then have them identify five excellent food sources of their vitamin, find the amount of the vitamin in the food sources, and depict this information on a bar graph. The graphs may either be created on graph paper or by utilizing computer software. The food sources should be represented by standard serving sizes. Students may either graph the food sources by percentage of RDA or by milligrams per serving. Have groups report their findings to the class and display their graph. Have each group describe the effects of not consuming an adequate amount of their vitamin.

KEY QUESTIONS

- Which food sources contain the vitamin at a level much higher than the other foods depicted on the graph?
- What are some ways these foods could be included in a teenager's diet?
- What are recipes that contain some of these food items?

4) WRITTEN EXERCISE

As a follow-up or enrichment activity, have students complete Teaching Aid 7a, *Nutrients and You*, during the student presentations or as a review. Students could use the information as a review for a test over nutrients.

RESOURCES

BOOK

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

VIDEOTAPE

Fundamental Human Nutrition, available from the Home Economics Curriculum Center.

1C- The student is expected to compare the nutritive value of various foods.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) CLASS DISCUSSION/INDIVIDUAL ACTIVITY

Lead a class discussion on the nutritive value of our food and the importance of learning how to compare food sources based on their nutrient content. Distribute copies of Teaching Aids 8a, 8b, and 8c, **Food Composition Table**, and Teaching Aid 9a, **Comparing the Nutritive Value of Foods**, to students. Display Teaching Aid 9a on the overhead projector and have students complete the information for "carrots" together as a class using the **Food Composition Table** as a resource. Have students complete Teaching Aid 9a on their own or with a partner. When students are finished, review the nutrients amounts for the foods listed and have students share their responses to the questions.

KEY QUESTIONS

- How are food composition tables beneficial in comparing the nutritive value of different foods?
- Where else can you find information on the nutritive value of food?
- Why is knowing the nutritive value of the food we eat important?

TA 8 *Food Composition Table*

TA 9a *Comparing the Nutritive Value of Foods*

TA 9b *Comparing the Nutritive Value of Foods*

2) GROUP ACTIVITY/CLASS DISCUSSION



Discuss with students how nutrition labels are a valuable source of nutrition information and assist consumers in comparing the nutritive value of foods. Lead students to brainstorm what foods are typically available in vending machines. Have students divide into groups. Give each group a copy of Teaching Aid 10, **Can Nutritious Foods Be Found In A Vending Machine?** After reviewing the instructions, have students complete both activities. After completing the assignment, have groups share their findings with the class. Use the information to lead a class discussion on selecting nutritious snacks from vending machines by reading nutrition labels.

TA 10 *Can Nutritious Foods Be Found In A Vending Machine?*

Nutrition labeling is presented in depth in TEKS 7C.

3) LABORATORY EXPERIENCE

Divide students into laboratory groups. Assign each group a different nutrient-rich vegetable or fruit. Have students research information on

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their vegetable or fruit to determine its nutritive value and how it is used. Have students use cookbooks as references to select a simple recipe for preparing their vegetable or fruit. After each group has prepared their selected vegetable or fruit, have the class members taste test all of the varieties. Have each group present the information on the fruit or vegetable that they learned from their research.

KEY QUESTIONS

- What nutrients are most prevalent in the fruits and vegetables that you prepared and tasted?
- What are other good sources of these nutrients?
- Which fruits and vegetables are good sources of several nutrients?
- What are some different ways each fruit and vegetable may be prepared and served?

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

RESOURCES

WEB SITES

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

Food and Drug Administration
vm.cfsan.fda.gov/

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

USDA Food Composition Data
www.nal.usda.gov/fnic/foodcomp/

1D- The student is expected to describe effects of nutritional intake on health, appearance, effective job performance, and personal life.

This TEKS also is addressed as part of a Blended Activity, See the section, **Blended Activities**.

NOTES

1) GUEST SPEAKER



Invite a guest speaker to talk to the class about the effects of nutrition on health, appearance, job performance, and personal life. Suggested speakers might include a dietitian, nutritionist, physician, or nurse. Discuss with students various questions they would like to ask the guest speaker.

KEY QUESTIONS

- How is nutrition related to appearance and job performance?
- Is it possible for good nutrition combined with adequate exercise to lengthen one's life span? How?
- What effect can good nutrition combined with exercise have on quality of life?

2) VIDEOTAPE/CLASS DISCUSSION

Have students view a video on the effects of nutritional intake on health, appearance, job performance, and personal life. Lead a class discussion on the importance of an individual's nutritional intake.

3) GROUP ACTIVITY/CASE STUDIES



Divide the class into small groups and distribute the case studies found on Teaching Aid 11, *Effects of Nutritional Intake-Case Studies*. Assign each group one of the case studies. Instruct students to evaluate the case study and assess the nutritional concerns that exist for the individual described in the case study. Have students respond to the following questions.

KEY QUESTIONS

- What conclusions can you draw about the attitude of the person in the case study toward nutrition? Give evidence to support your answer.
- How does the nutritional intake of each individual affect health, appearance, and personal attitudes?

TA 11 *Effects of Nutritional Intake-Case Studies*

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Have groups share their case study and their responses to the questions with the class.

4) INDIVIDUAL ACTIVITY/ FHA/HERO

As a Power of One activity, have students identify a concern they have about their diet, eating habits, health, weight management, etc. Have students use the FHA/HERO planning process to develop a plan targeting their individual concerns for one week. At the end of the week, have students evaluate the results and set goals for a lifetime of good nutrition.

FHA/HERO ACTIVITIES

- Student Body
- Power of One: A Better You
- STAR Event: Illustrated Talk
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

BOOKS

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

Home Economics Curriculum Center, 1997. *Skills for Life* Module 2D, "Human Nutrition."

WEB SITES

American Dietetic Association
www.eatright.org

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

1E- The student is expected to explain the relationship of activity levels and calorie intake to health and wellness, including weight management.

1) WRITTEN EXERCISE/CLASS DISCUSSION

Ask students to bring packaging from their favorite snack foods to class. Display the packages for student use with the written exercise. Distribute a copy of Teaching Aid 12, *Calculation of Energy Needs*, to each student. Have students complete the activity; lead a class discussion on their findings.

KEY QUESTIONS

- What misconceptions did you have regarding how long it would take your body to burn the food energy from your snack if you are sedentary?
- How much time would it take you to use the calories from the snack if you were moderately active?
- How much time would it take you to use the calories from the snack if you were extremely active?
- How is fat intake related to a person's activity level?

2) INDIVIDUAL ACTIVITY/CLASS DISCUSSION/ FHA/HERO

Have each student choose two items from the selection of snack foods in Strategy 1 above, adding additional ones if needed. Display Teaching Aid 13, *Keep Moving!*, on the overhead projector or distribute as a student handout. Instruct the students to use the information on the Teaching Aid to determine how long it would take to perform the listed activities to utilize calories consumed from their selected snacks (they will use the calorie information from the food label). Have students report the results of their calculations.

Display Teaching Aid 14, *Exercise for Health!*, on the overhead projector. Lead students to name additional benefits of exercise to health and wellness across the lifespan.

KEY QUESTION

- What is the relationship of activity levels and caloric intake to health and wellness?

As a FHA/HERO Student Body project, have chapter members organize an aerobics or exercise class for students at your school.

3) CLASS DISCUSSION/GROUP ACTIVITY

Display a transparency of Teaching Aid 15, *The Weight Cycle*. Use the

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TA 12 *Calculation of Energy Needs*

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TA 13 *Keep Moving!*

TA 14 *Exercise for Health!*

TAAS
MATH

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NOTES

TA 15 The Weight Cycle

TA 16 Tips to Healthy Weight Control

diagram to explain how repeatedly losing and gaining weight can affect the makeup of the body and the way the body uses food. Lead students to discuss how use of fad diets, especially very-low-calorie or very-low-carbohydrate diets, and yo-yo dieting can cause serious health problems. Discuss Teaching Aid 16, **Tips to Healthy Weight Control**.

KEY QUESTIONS

- Why would a low-calorie or low-carbohydrate diet promote loss of lean muscle mass?
- What does the body burn when it does not have access to enough food energy?
- What happens to a person's muscle content with each cycle of weight loss and weight gain?
- Why would a person's body fat content increase when the person gains weight after a diet?
- Why is it safer to work toward maintaining a healthy weight than to repeatedly gain and lose weight?
- Why is exercise one of the best ways to become fit?
- Why would increasing muscle mass increase the body's ability to burn food energy?
- Where would you tell a friend to find reliable nutrition information on weight loss and healthy weight maintenance?

Divide the class into groups. Have each group locate or develop a diet and exercise plan which promotes good health and one that does not promote good health. Ask groups to share their plans with the class.



FHA/HERO ACTIVITIES

- Power of One: A Better You
- Student Body
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

BOOKS

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

Home Economics Curriculum Center, 1997. *Skills for Life* Module 2C, "Weight Control."

WEB SITES

American Dietetic Association
www.eatright.org

Nutrition and Food Science

Knowledge and Skills.

(2) Principles of nutrition.

The student determines the relationship of nutrition to individual and family health.

The student is expected to:

- (A) outline strategies for prevention, treatment, and management of diet-related diseases and eating disorders;
- (B) explain the relationship of nutrition and stress;
- (C) summarize local, state, and federal legislation and policies pertaining to nutrition and health;
- (D) assess long-term effects of food choices; and
- (E) discuss food allergies and intolerances.

2A- The student is expected to outline strategies for prevention, treatment, and management of diet-related diseases and eating disorders.

1) CLASS DISCUSSION/DEMONSTRATION

Discuss with students the importance of calcium in the diet, emphasizing the following points:

- Calcium is a *macromineral*, a mineral found in large amounts in the body.
- Calcium is needed for bone density, blood clotting, muscle contraction, and normal nerve functions.
- Insufficient amounts of calcium over a period of years leads to osteoporosis, a disease characterized by a decrease in bone mass and bone density leading to fragile bones and curved spine.
- Foods which are rich in calcium include milk and milk products, leafy green vegetables (spinach), broccoli, and soft-boned fish (canned sardines with bones).

Illustrate how much calcium is in the human body at differing ages with "calcium bags." Use three plastic bags and fill them with the following amounts of flour:

- Newborn baby - 1/2 cup flour
- 10 year old - 3 1/2 cups flour
- 15 year old - 7 cups flour

This is a visual activity; flour does not contain calcium.

Conduct a demonstration to show a bone that has had the calcium removed. Clean a chicken bone of all fat and meat; a leg bone works well. Place the bone in a jar. Cover with vinegar. Allow the bone to stand at room temperature for three to four days. At the end of this time the bone should be rubbery and pliable because the outer shell of the bone is the only remaining part.

KEY QUESTIONS

- Why does the body need adequate intake of calcium?
- What are food sources of calcium?

2) RESEARCH/SYMPOSIUM/LAB EXPERIENCE

Using Teaching Aid 17, *Nutrition Research Assignment*, have students select a research topic from the list or select other topics related to prevention, treatment, and management of diet-related diseases, medical conditions, and eating disorders. Group students according to their research topics and have them participate in a class symposium.

Following the symposium, have students turn in their written summaries. As an enrichment experience, have students plan and prepare a meal that would be suitable for persons with their assigned medical

NOTES

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TA 17 *Nutrition
Research
Assignment*

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RESOURCE

BOOK

Home Economics
Curriculum Center, 1997.
Skills for Life Module 2C,
"Weight Control."

TA 18a, 18b, & 18c
*Mr. American
Diet on Trial*



condition. Provide cookbooks and other resources related to meal planning for individuals with diet-related disorders.

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

3) GUEST SPEAKER



Invite a health professional to present information to the class on eating disorders. Have students write any questions they may have regarding eating disorders on index cards; collect the cards and ask the guest speaker to respond to the students' questions as appropriate.

KEY QUESTIONS

- What are eating disorders?
- What are the symptoms of these disorders?
- What are the similarities and differences in these disorders?
- Why are eating disorders so often related to adolescence?
- How do these disorders begin?
- What are the short-term and long-term psychological and physiological effects of eating disorders?
- How do eating disorders impact food choices and nutritional health?
- What treatment is available for individuals with eating disorders?

4) ONE-ACT PLAY

Distribute Teaching Aids 18a, 18b, and 18c, *Mr. American Diet on Trial* to students. Instruct the students to arrange the seating of the class to resemble a courtroom. Assign or have student volunteers to play the characters in the play, reserving the role of jury foreman for yourself. Instruct each character to make a placard from a 5x8 index card stating the name of the character that he or she will be enacting. Have students hang the signs from strings around their necks. Assign the remaining students the role of the jury. They are to take notes and read along with the script to help determine the guilt or innocence of Mr. American Diet. The information in the script will also help them make suggestions for reform options in the event that Mr. American Diet is found guilty.

Tell the characters to take their places to begin the play. After the play, discuss ways that Mr. American Diet can improve his blood cholesterol level.

FHA/HERO ACTIVITIES

- Student Body
- STAR Event: Illustrated Talk - Nutrition and Cardiovascular Disease

2B- The student is expected to explain the relationship of nutrition and stress.

1) RESEARCH/CLASS DISCUSSION

Write the word "desserts" on the chalkboard or overhead. Ask students what the word spells backwards (stressed).

KEY QUESTION

- Why do some people feel the urge or tend to crave desserts or other sweets when stressed?

Use this questioning as a springboard for student research on stress, diet, and nutritional health. Have students read resources on the relationship between diet and stress and then present their information to the class. Use the student information as a guide for a class discussion on the relationship of stress, diet, and nutritional health.

KEY QUESTIONS

- How does stress influence the types and quantity of foods consumed by individuals?
- What are the potential short-term and long-term effects of using food as a way of responding to stress?
- How does stress influence the effectiveness of the digestive process and metabolism?
- What are the implications of prolonged stress on the human body?
- What are the implications of prolonged stress on nutritional health and well-being?
- What are the implications of nutritional health and well-being on one's reaction to stressful situations?

2) CASE STUDIES/CLASS DISCUSSION/INDIVIDUAL ACTIVITY



Lead a class discussion using Teaching Aid 19, *Case Studies on Stress and Diet*. Following the discussion, distribute one of the case studies to each student. Have students use Teaching Aid 20, *A Pattern for Daily Food Choices*, to plan healthy menus for two or three days for the individual in their case study considering their ages and activity levels.

KEY QUESTIONS

- What suggestions do you have for Jim, Chin Lee, Adolf, and Cindy in regard to their lifestyles and diets?
- Why should they change their present habits?
- If the present habits are not changed, what are the potential long-term effects for each of these individuals?

NOTES

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TA 19 *Case Studies on Stress and Diet*

TA 20 *A Pattern for Daily Food Choices*

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3) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Have students read and bring to class current magazine or newspaper articles which discuss the role of stress, diet, and nutritional health. Lead a class discussion on the validity of the articles and their value as reliable sources of nutrition information.

KEY QUESTIONS

- What nutritional claims are made?
- Can you substantiate the claims made by the article with sound nutritional information obtained from a nutrition text or other reliable source?
- Which reliable sources would you use?
- In general, what validity is there to the claim that diet can affect or improve the ability to positively manage stress?
- What have you learned about the relationship of diet, stress, and nutritional health?

4) FHA/HERO

To help classmates during times of stress at school, have chapter members sell apples and oranges before and after school and during lunch during test times and before final exams.

FHA/HERO ACTIVITIES

- Power of One: A Better You
- Student Body
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

BOOKS

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

Home Economics Curriculum Center, 1997. *Skills for Life* Module 2A, "Stress Management."

WEB SITES

American Dietetic Association
www.eatright.org

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

2C- The student is expected to summarize local, state, and federal legislation and policies pertaining to nutrition and health.

1) GUEST SPEAKER



Invite a guest speaker such as a local health inspector or food and safety inspector to speak to the class regarding state and federal regulations governing the food industry.

KEY QUESTIONS

- What are your primary job responsibilities related to enforcing legislation and policies pertaining to nutrition and health?
- What is your education and experience background that is necessary in your position?
- What local, state, and federal regulations are you responsible for?
- What are the implications of current legislation pertaining to the food industry?
- What groups lobby for food industry legislation?
- How are businesses informed of new policies and regulations requiring compliance?
- What are the penalties for lack of compliance?
- How are individual consumers affected by food industry regulations and legislation?

2) RESEARCH/INDIVIDUAL OR GROUP ACTIVITY



Have students collect newspaper and magazine articles on nutrition and health issues impacted by existing or pending legislation and regulations. Students should search for articles outlining issues being addressed at the state and federal levels. Have students work individually or in groups to prepare reports or position papers on these issues to share with the class. Following the reports, have students organize a resource file of the articles and information they gathered during their research.

3) RESEARCH/ORAL PRESENTATION/VISUAL DISPLAY



Have students work individually or in groups to gather information about the Texas Department of Health and the food stamp program managed by the Texas Department of Human Services.

KEY QUESTIONS

- What is the vision statement of the Texas Department of Health?
- What is the responsibility of the Texas Department of Health?
- What is the WIC program?
- How are School Breakfast and School Lunch programs managed and funded?
- Although not under the jurisdiction of TDH, how is the food stamp programs managed and funded?

NOTES

**SOCIAL
STUDIES**

**TAAS
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**TAAS
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NOTES

Have students research further and find information about the Bureau of Food and Drug Safety of the Texas Department of Health. Divide the class into groups and have each group summarize responsibilities of one of the following divisions:

- Manufactured Foods Division
- Milk and Dairy Division
- Meat Safety Assurance Division
- Retail Foods Division
- Seafood Safety Division

Have students prepare a visual display to assist them in an oral presentation to the class.

RESOURCES

AGENCIES AND ORGANIZATIONS

Texas Department of Health

WEB SITES

Food and Drug Administration
vm.cfsan.fda.gov/list.html

Texas Department of Health
www.tdh.texas.gov/

2D- The student is expected to assess long-term effects of food choices.

1) PROJECT/CLASS DISCUSSION

Have students keep a food recall chart for three days listing everything they consume. Have students use a dietary analysis computer program and Teaching Aid 20, *A Pattern for Daily Food Choices*, to analyze their current dietary practices to determine the nutritional adequacy of their diet. Lead a class discussion about the importance of adequate nutrition during all stages of the life span, especially adolescence. Have students review the information on the nutrients from Teaching Aid 7a, *Nutrients and You*.

KEY QUESTIONS

- What nutrients are present in your current diet? What nutrients are lacking?
- How do nutrients missing from the diet reduce the contributions made by those nutrients that are present?
- If your present dietary habits continue, what are the potential effects on future health?
- If the nutrients continue to be omitted, what are the potential effects on future health?
- What dietary changes need to be made for improved nutrition?
- At what point in life do individuals form dietary habits?
- How do people form dietary habits?
- What are some examples of dietary habits?
- How can dietary habits be changed?

2) GROUP ACTIVITY/ORAL PRESENTATION



Obtain copies of popular fad diets and diet books. Divide students into groups and assign each group one of the fad diets to analyze for nutritional adequacy, inadequacy, or dangers. Determine the nutritional adequacy or inadequacy by using a suggested daily menu for the diet and determining how it meets the requirements of the *Recommended Dietary Allowances (RDA)*, the *Dietary Reference Intakes (DRI)*, and the *Food Guide Pyramid*. These guidelines are found on Teaching Aid 21, *Recommended Dietary Allowances*, Teaching Aid 22, *Dietary Reference Intakes*, and Teaching Aid 23, *Food Guide Pyramid*. The menu also could be analyzed using a dietary analysis computer program. Have student groups present their findings to the class, pointing out any dangers that they would anticipate.

KEY QUESTION

- What are the potential long-term affects of these diets?

NOTES

TA20 *A Pattern for Daily Food Choices*

TA 7a *Nutrients and You*

TA 7b *Nutrients and You Answer Key*



TA 21 *Recommended Dietary Allowances*

TA 22 *Dietary Reference Intakes*

TA 23 *Food Guide Pyramid*



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NOTES

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TA 24 *Nutrition and Your Health: Dietary Guidelines for Americans*

RESOURCES

WEB SITES

National Cancer Institute
www.nci.nih.gov/

Cancernet
cancernet.nci.nih.gov/

Oncolink
www.oncolink.upenn.edu:8083/

American Medical Assn.
www.ama-assn.org/



3) RESEARCH/PROJECT

Have students work in groups to research the effects of diets high in cholesterol and sodium. Instruct each group to write a news article discussing these results. After groups have shared their news articles with the class, guide students in evaluating the articles and select one to publish in the school newspaper. Students may elect to compile information from more than one news article or submit a series of articles to the school newspaper, maybe under a "To Your Health" column. Arrange for students to format and print the news article using a computer desktop publishing program.

*Maintaining such a column in the school newspaper could be a joint effort of students in various home economics courses or possibly health classes.

4) RESEARCH/CLASS DISCUSSION

Lead a class discussion about the extreme differences in cancer rates in countries around the world. Note that researchers have concluded that these differences are partially due to the food choices of the people in these countries. Have students use resources to gather information on the dietary practices and incidence of diseases such as cancer in the populations of other countries. Display a transparency of Teaching Aid 24, *Nutrition and Your Health: Dietary Guidelines for Americans*. Lead students to draw conclusions regarding the relationship of dietary practices to incidence of disease.

KEY QUESTIONS

- What do researchers believe accounts for the lower breast cancer rates in Japanese women compared with American women?
- How might the fact that Japanese women consume lower amounts of fat than American women affect this rate?
- What do researchers believe accounts for the increased rates of stomach cancer in countries like Japan, Finland, and Iceland?
- What dietary practices might account for the increased rate of stomach cancer?
- What conclusions can you draw regarding the relationship of dietary practices to incidence of disease?

FHA/HERO ACTIVITIES

- STAR Event: Illustrated Talk - There are numerous topics related to long-term effects of food choices
- Student Body
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

2E- The student is expected to discuss food allergies and intolerances.

1) CLASS DISCUSSION/WRITTEN EXERCISE

Give each student a copy of Teaching Aid 25, **KWL**. Have them begin the lesson by writing in the "K" box everything they "Know" about food allergies. Next, they are to write everything they "Wish" they knew about food allergies in the "W" Box. Ask student volunteers to share what they have written in their "W" box. Display a transparency of Teaching Aid 26, **Food Allergies**. Discuss with students the information about food allergies, their symptoms, and management. Distribute Teaching Aids 27a and 27b, **Food Allergy Facts and Fiction**. Use the information to continue the class discussion on food allergies. Have students summarize what they have learned about food allergies in the "L" box on their papers.



2) GUEST SPEAKER

Invite someone (maybe a faculty or staff member) with food allergies or intolerances to speak to the class about adjusting diet and recipes to accommodate these conditions. The guest speaker could prepare adjusted recipes for students to taste test.



3) TEAMWORK/WRITTEN EXERCISE

Have students work in teams and research the public and school libraries as well as Web sites to gather information about food allergies and intolerances. Review with students the importance of using reliable nutrition resources for information. Have students write a brief report of their findings, including a bibliography of their sources.

KEY QUESTIONS

- What information is available about dietary practices for persons with food allergies and intolerances?
- What other information is helpful to consumers?



4) TEAMWORK/VISUAL DISPLAY

Using the information students gathered in Strategy 3 above, have students work in teams and prepare small posters or other types of visual displays that reflect helpful information for consumers regarding food allergies and intolerances. Students could use various desktop publishing and graphics software programs to produce their posters. Have students explain their posters to the class.

NOTES

TA 25 **KWL**
TA 26 **Food Allergies**
TA 27a & 27b
Food Allergy
Facts and Fiction

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NOTES

KEY QUESTIONS

- What types of information regarding food allergies and intolerances do consumers need?
- Where can consumers find this information?

RESOURCES

WEB SITE

Food Allergy Network
www.foodallergy.org/

Nutrition and Food Science

Knowledge and Skills.

(3) Nutritionally-balanced diets.

The student utilizes various dietary guidelines in making wise food choices.

The student is expected to:

- (A) explain the food pyramid and various dietary guidelines;
- (B) compare recommended dietary allowances (RDA) throughout the life cycle;
- (C) set goals for good eating habits; and
- (D) apply dietary guidelines to meet nutritional needs throughout the life cycle.

3A- The student is expected to explain the food pyramid and various dietary guidelines.

1) CLASS DISCUSSION/PROJECT/VISUAL DISPLAY



Display a transparency of Teaching Aid 23, *Food Guide Pyramid*.

Explain to students that this is an up-to-date guide for good eating from the U.S. Department of Health and Human Services and the U.S. Department of Agriculture. Discuss the fact that these agencies use this format to communicate important nutrition information to Americans.

KEY QUESTIONS

- Why might this be an effective tool for presenting nutrition information to consumers?
- How have guidelines from these agencies changed in recent years? What prompted these changes?
- What types of information can be found on the pyramid?
- How can this tool be effectively used with young children?
- Why are foods that should be consumed in the largest number of servings placed at the bottom of the pyramid?
- Why are fats, oils, and sweets placed at the top?
- Do you think the pyramid provides an effective format for presenting nutritional requirements? Why?

Instruct students to recreate the *Food Guide Pyramid* in a poster format. Have students use pictures from magazines or newspapers to represent the foods from each group and category. Students should find pictures for the maximum number of servings for each group or category. For example, they should find eleven pictures of grains, four of fruits, five of vegetables, and so on. For the fats, oil, and sweets category, students should locate one picture representing only one serving. Students should use pictures of foods that they would actually eat. Monitor student progress and check for student understanding of the number of servings in each category and the purpose of the pyramid graphic. Display the posters in the classroom or display case. Use Teaching Aid 28, *Food Guide Pyramid Poster Grade Sheet*, as an assessment tool for the posters.

2) INDIVIDUAL ACTIVITY

Distribute copies of the district's school lunch and breakfast menus or obtain copies of menu plans from a child care center or from adult care centers. Ask students to classify foods found in the menus into the categories found in Teaching Aid 20, *A Pattern for Daily Food Choices*, a resource from the U.S. Department of Agriculture and the U.S. Department of Health and Human Services. Remind the students that classification is a scientific tool used to organize data for better understanding and analysis.

NOTES

TA 23 *Food Guide Pyramid*

TA 28 *Food Guide Pyramid Poster Grade Sheet*

TA 20 *A Pattern for Daily Food Choices*

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TA 20 *A Pattern for
Daily Food
Choices*

TA 23 *Food Guide
Pyramid*

TA 24 *Nutrition and
Your Health:
Dietary
Guidelines for
Americans*

3) WRITTEN EXERCISE

Ask students to translate what has been discussed regarding the *Food Guide Pyramid* into a paragraph using the writing prompt, "*The Food Guide Pyramid: What Does It Communicate?*" After students have completed their writing, ask student volunteers to share their responses.

KEY QUESTIONS

- What was your first impression of the *Food Guide Pyramid*?
- What revisions (if any) do you predict will need to be made to the *Food Guide Pyramid* by the year 2020? Why?

4) CLASS DISCUSSION

Have students view Teaching Aid 20, *A Pattern for Daily Food Choices*, Teaching Aid 23, *Food Guide Pyramid*, and Teaching Aid 24, *Nutrition and Your Health: Dietary Guidelines for Americans*. Lead a class discussion on these three examples of dietary guidelines. After defining and discussing the guidelines, draw a chart on the chalkboard and have students identify the advantages and disadvantages of each plan. Have students analyze the nutritional adequacy and the ease following each of the plans.

KEY QUESTIONS

- What are the similarities and differences in the three plans?
- Which plan would be easiest to follow for most consumers?
- Which plan best communicates nutrition information to children? to teens? to older adults?

RESOURCES

WEB SITES

Food and Drug Administration
www.cfsan.fda.gov/list/html

USDA Food and Nutrition Information Center
www.nal.usda.gov/fnic/

3B- The student is expected to compare recommended dietary allowances (RDA) throughout the life cycle.

1) CLASS DISCUSSION/INDIVIDUAL ACTIVITY

Review with students information found on Teaching Aid 29, *Special Nutrition Requirements Across the Life Span*. Distribute copies of Teaching Aid 21, *Recommended Dietary Allowances*, and Teaching Aid 22, *Dietary Reference Intakes*, to students pointing out the different life cycle stages addressed in both charts. Distribute a copy of Teaching Aid 30, *What Are Nutrition Standards?* to students. Have students read the information on Teaching Aid 30; lead a class discussion on the different nutrition standards used in the United States. Have students compare the nutrient recommendation in the *RDA* and the *Dietary Reference Intakes* to the information in Teaching Aid 29. Next have students compare the *RDA* and *Dietary Reference Intakes* to the Daily Values on nutrition labels and explain how the two work together to help consumers in planning nutritious meals and in making wise food choices. Have students practice using the *RDA* and *Dietary Reference Intakes* charts to become familiar with identifying recommended amounts of the nutrients.

KEY QUESTIONS

- What is the relationship of good nutrition to health and wellness?
- How does the RDA for iron for a fifteen-year-old female differ from that of a pregnant woman?
- How does the RDA for protein for a ten-year-old child differ from that of a eighteen-year-old male?
- How does the RDA for vitamin A for a six-year-old male differ from that of an eleven-year-old male?
- How do recommended amounts of calcium vary across the life span for females?
- How do nutritional needs change throughout the stages of the life span?

2) GROUP ACTIVITY



After reviewing how to use the *RDA* and *Dietary Reference Intakes* charts, divide the class into groups and distribute four paper plates to each group. Have students look through magazines or newspaper ads to find pictures of foods that they enjoy eating. Have students cut out the pictures and place them in the middle of the table. Have each group label one plate "Breakfast", one plate "Lunch", one plate "Dinner", and one plate "Snacks." Have students select four food items for each meal that hopefully will provide adequate nutrition and mount the pictures on the appropriate plates. Distribute copies of Teaching Aid 29, *Special Nutrition Requirements Across the Life Span*. Using dietary analysis computer software or food composition charts from Internet

NOTES

TA 29 *Special Nutrition Requirements Across the Life Span*

TA 21 *Recommended Dietary Allowances*

TA 22 *Dietary Reference Intakes*

TA 30 *What Are Nutrition Standards?*

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TA 29 *Special Nutrition Requirements Across the Life Span*

TA 21 *Recommended Dietary Allowances*

TA 22 *Dietary Reference Intakes*

NOTES

TA 31a & 31b Nutrient Analysis



resources or textbooks (or use Teaching Aid 8a-8c, **Food Composition Table**), have each group calculate the amount of nutrients found in each food item, recording the amounts on Teaching Aid 31a, **Nutrient Analysis**. Next have students complete Teaching Aid 31b using Teaching Aid 21, **Recommended Dietary Allowances** and Teaching Aid 22, **Dietary Reference Intakes**, as resources. Have the groups present their menus and nutrient analysis results to the class.

KEY QUESTIONS

- Which group had the best "adequate" score for the 3 year old? for the fifteen-year-old male? for the fifteen-year-old female? for the fifty-one-year-old male? for the fifty-one-year-old female? for the pregnant woman?
- Which group had the best overall "adequate" rating for their food choices?
- What foods did they choose?
- Would you be likely to choose the menu the winning group selected? Why?

*As an enrichment activity, have students investigate the incidence of tooth decay in young children coinciding with increased use of bottled water with minerals removed. It can no longer be assumed that individuals, especially children, will have adequate intake of fluoride from the drinking water.

FHA/HERO ACTIVITIES

- Power of One: A Better You
- Student Body

RESOURCES

BOOK

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

WEB SITES

American Dietetic Association
www.eatright.org

Food and Nutrition Board of the National Academy of Sciences
www2.nas.edu/fnb/

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

3C- The student is expected to set goals for good eating habits.

1) INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Have each student design a three-day menu plan based on Teaching Aid 23, **Food Guide Pyramid**, and Teaching Aid 24, **Nutrition and Your Health: Dietary Guidelines for Americans**. Instruct students to include a variety of foods in their menus. Have students exchange menus and analyze them based on these nutrition guidelines. If adjustments are needed, have students make recommendations for additions or deletions to the menus.

KEY QUESTIONS

- Which guidelines are easiest to follow in planning the menus?
- How do these guidelines help individuals set goals for good eating habits?
- What adjustments did you recommend to the menus that you analyzed?

2) LABORATORY EXPERIENCE

Divide students into laboratory groups. Have each group select one of their menus from Strategy 1 above to prepare. Have students share with the class the adjustments made to the menus and how these adjustments improved the nutritional value of the meal.

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

3) PROBLEM SOLVING

Collect nutrition charts from various fast food restaurants in your community and distribute copies to students, or have students locate this information from the Internet (www.olen.com/food/). Have students use the information gathered and nutritional analysis computer software to complete Teaching Aid 32, **Fast Food Dining**, Teaching Aid 33, **Fast Food Dining Food Intake Data**, and Teaching Aid 34, **Fast Food Dining Report of Nutritional Analysis**. If nutritional analysis computer software is not available, provide copies of food composition tables to assist students in analyzing their food intake. Students also may find food composition tables of selected fast food items at Web sites related to fast food dining. (See **RESOURCES**.)

After students have completed their analysis, have them use Teaching Aid 23, **Food Guide Pyramid**, and Teaching Aid 21, **Recommended Dietary Allowances**, to make improvements to their fast food selec-

NOTES

TA 23 **Food Guide Pyramid**

TA 24 **Nutrition and Your Health: Dietary Guidelines for Americans**

TA 32 **Fast Food Dining**

TA 33 **Fast Food Dining Food Intake Data**

TA 34 **Fast Food Dining Report of Nutritional Analysis**

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NOTES

TA 23 *Food Guide Pyramid*

TA 21 *Recommended Dietary Allowances*

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tions. Provide students with a new copy of Teaching Aid 33, ***Fast Food Dining Food Intake Data***. Have students compare the nutrient values of the new food selections with their original choices and share with the class the changes that resulted in improved nutrition.

KEY QUESTIONS

- What did you learn about fast food dining in relation to your own individual eating habits and daily food choices?
- To what extent can fast food restaurants be the source of food for good eating habits?

4) WRITTEN EXERCISE/ FHA/HERO

Have students write a one to two page paper outlining their individual goals for improved eating habits and detailing a plan for achieving these goals. Place student papers in a folder and return them to the students at the end of the semester. Have students analyze their success in achieving their goals for improved eating habits.

*As an FHA/HERO activity, have students use this plan as part of a *Power of One: A Better You* project.

FHA/HERO ACTIVITIES

- Power of One: A Better You
- STAR Events: Skills for Life; Focus on Children
- Student Body
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

PAMPHLET

Fast Food Facts published by the Minnesota Attorney General's office. Free by E-mail: consumer.ag@state.mn.us

WEB SITE

Fast Food Facts
www.olen.com/food/

CU

3D- The student is expected to apply dietary guidelines to meet nutritional needs throughout the life cycle.

TO THE TEACHER

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) **INDIVIDUAL ACTIVITY/ORAL PRESENTATION**



Have student volunteers contact the American Association for Retired Persons (AARP) and other organizations that serve older adults to obtain pamphlets about dietary needs and nutrition guidelines for older adults. Ask students to review the literature that has been sent or use other resources to prepare a short oral presentation on an assigned topic. Topics might include:

- Nutrient Needs of Older Adults
- Why Nutrient Needs Vary Among Older Adults
- The Effects of Aging on Nutritional Health
- Cardiovascular Health and Aging
- The Effects of Medications on Nutrient Absorption
- other topics of interest to students

After presentations are completed, ask students to work in pairs and write a case study about an older adult in need of accurate nutrition information and help with menu planning. Have students exchange case studies, and using the information from the presentations, develop a three-day menu plan for the older adult in the case study. Have student volunteers read their case studies and share their menu plans with the class.

TAAS
READING

TAAS
WRITING

KEY QUESTIONS

- What are some general guidelines a healthy older adult might consider in planning meals?
- How do these guidelines affect health maintenance for the older adult?
- How do these guidelines differ from those used for younger individuals? Why are they different?

2) **INTERVIEW/CLASS DISCUSSION**

Instruct students to interview food service managers at a child care center, an after-school program, and an elementary school cafeteria to determine the guidelines used in these settings to meet nutritional needs of individuals served by these programs. As a class, develop questions to be used in the interviews. Assign various types of settings to individual students or teams of students.

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NOTES

TA 29 *Special Nutrition Requirements Across the Life Span*

TA 21 *Recommended Dietary Allowances*



KEY QUESTION

- What guidelines do the food service managers use in meal and menu planning?

Have students report results, and lead students to compare and contrast the findings.



3) CLASS DISCUSSION/GROUP ACTIVITY

Review Teaching Aid 29, *Special Nutrition Requirements Across the Life Span*, and Teaching Aid 21, *Recommended Dietary Allowances*, to analyze nutrient requirements throughout the life span. Discuss reasons why an increase in nutrients and/or calories might be necessary for individuals at each stage of the life span.

KEY QUESTIONS

- Why might you expect a child's intake of protein to increase?
- In what instances might carbohydrates need to be increased in a young teen?
- When might an adult need to increase protein?
- Would protein needs increase in a female adult who is pregnant or lactating? Why?
- What would you suggest for an older adult who has lost too much weight because of a recent illness?

Have students form triads and determine what daily dietary adjustments they would recommend for individuals at each stage. (e.g., What would you suggest be added to the daily diet of a pregnant woman needing to increase protein and calcium intake?) Have students share their responses with the class.

*As an FHA/HERO chapter activity, have chapter members plan, prepare, and serve a meal to older adults or prepare nutritious snacks for young children.

FHA/HERO ACTIVITIES

- Power of One: A Better You
- Student Body
- Skills for Life
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

Nutrition and Food Science

Knowledge and Skills.

(4) Nutritionally-balanced diets.

The student analyzes nutritional adequacy of selected diets utilizing available technology.

The student is expected to:

- (A) analyze the reliability of nutrition information;
- (B) evaluate nutritive supplements;
- (C) assess nutritional needs of persons at various activity levels;
- (D) use available technology to compare personal food intake to recommended guidelines;
- (E) interpret nutrition assessment data from available technology; and
- (F) utilize decision-making skills to improve eating habits, exercise, and management of optimum weight.

4A- The student is expected to analyze the reliability of nutrition information.

1) BRAINSTORMING/GROUP ACTIVITY



Have students brainstorm and list sources of nutrition information such as those listed below.

- family
- friends
- family doctor
- magazine and newspaper articles
- articles from research publications
- videotapes or television programs
- advertisements
- books
- community agencies

Have students work in pairs to determine which sources from their lists would be reliable and which would be unreliable. Have each pair share their decisions with the class.

KEY QUESTIONS

- Which sources of information are you most likely to use? Why?
- What happens when you make nutrition and wellness choices using unreliable information?
- What do individuals have to gain from making unreliable nutritional claims?

2) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Have students read Teaching Aid 35, *What IS Reliable Nutrition Information?* Lead a class discussion on the importance of knowing where to find reliable nutrition information and how our government is responsible for seeing that nutrition information based on scientific evidence is made available to consumers.

KEY QUESTIONS

- What are some sources of reliable nutrition information?
- What professionals are considered reliable nutrition experts?
- What type of education and training is required to be considered a reliable nutrition expert?
- What agencies and organizations support research in the area of nutrition and publish reliable nutrition information?
- What can consumers do to protect themselves from nutrition fraud?
- What can you do to educate your family and friends about nutrition fraud and where they can find reliable nutrition information?

NOTES

TA 35 *What IS Reliable Nutrition Information?*

**TAAS
READING**

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NOTES

TA 36 *You Be the Judge*

TA 21 *Recommended Dietary Allowances*

TA 23 *Food Guide Pyramid*

3) GROUP ACTIVITY



Have students work in pairs to develop a list of criteria for evaluating sources of nutrition information. Display Teaching Aid 36, *You Be the Judge*, on the overhead projector and discuss with students. Have students share their list of criteria with the class. Have a student volunteer compile the information and develop a class list of criteria for evaluating sources of nutrition information. The list should include criteria such as:

- Is the author or source of information reputable?
- What are the credentials of the author or source of information?
- Where and when was this information published?
- Does the author or source of information have anything to gain by promoting this information?
- Is the information presented in a logical way and supported by reputable and extensive research?
- Does more than one reputable source support the same information?

4) GROUP ACTIVITY/CLASS DISCUSSION



Instruct students to locate articles or advertisements for popular weight reduction diets, including fad diets. Divide students into groups, and have each group analyze one of the diets. Have students use Teaching Aid 21, *Recommended Dietary Allowances*, Teaching Aid 23, *Food Guide Pyramid*, and other resources to analyze the diets. Lead a class discussion on the findings, and have students use the list of criteria for evaluating nutrition information from Activity 3 above in their analysis and evaluation of the diets.

RESOURCES

BOOK

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

WEB SITES

American Dietetic Association
www.eatright.org

Food and Nutrition Board-National Academy of Sciences
www2.nas.edu/fnb/

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

4B- The student is expected to evaluate nutritive supplements.

1) INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Review with students information regarding nutritive supplements. Select ten nutritive supplements for students to investigate. Nutritive or dietary supplements include vitamins, minerals, fiber, herbs, other botanicals, amino acids, concentrates, and extracts. Also locate flyers or additional advertisements or packaging information pertaining to the ten products. Set up ten stations in the classroom, placing one supplement and its corresponding information at each station. Have students rotate through each station, answering the questions on Teaching Aid 37, *Evaluation of Nutritive Supplements*, as they visit each station. Provide students with additional product information, such as magazine articles or information gleaned from reliable sources that students will need to complete the exercise. Use student information to lead a class discussion about being a wise consumer regarding nutritive supplements, their costs, and medically recognized benefits.

KEY QUESTIONS

- What is the difference between nutritive supplements and what has traditionally been referred to as "vitamins"?
- Why is it imperative that consumers evaluate nutritive supplements before purchasing and using them?

2) CASE STUDY/CLASS DISCUSSION



Have students view Teaching Aid 38, *Supplements for Muscle Gain*. Lead a class discussion on the importance of evaluating nutritive supplements.

KEY QUESTIONS

- What are amino acids?
- What do you know about the function of protein in the body?
- What are the dangers of overloading the body with nutritive supplements?
- How do you know how much is needed?
- What is your advice for Matt?

NOTES

TA 37 *Evaluation of Nutritive Supplements*

**TAAS
READING**

TA 38 *Supplements for Muscle Gain*

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NOTES

RESOURCES

AGENCIES AND ORGANIZATIONS

American College of Sports Medicine

BOOK

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide.*

WEB SITES

American Dietetic Association
www.eatright.org

Center for Science in the Public Interest
www.cspinet.org

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

4C- The student is expected to assess nutritional needs of persons at various activity levels.

1) GUEST SPEAKER



Invite a dietitian or other resource person to speak to the class about dietary analysis computer programs available. Have the resource person address how the programs can be used to analyze diets planned for individuals of various ages and/or persons at various activity levels. In advance, have the students enter sample diets of teenagers and print out the computer programs nutritional analysis. Ask the resource person to analyze these sample diets based on the results of the computer nutritional analysis.

KEY QUESTION

- How can these types of computer programs help individuals at various activity levels assess their nutritional needs?

2) INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Using Teaching Aid 39, *Assessing the Nutritional Needs of Individuals at Various Activity Levels*, have students illustrate nutritious meals for one day. Then have students assess the nutritional needs of the individuals listed at various activity levels and evaluate the day's meals to determine how they meet the nutritional needs of each of the individuals listed. Have students address how meals can be modified to meet special nutritional needs and varied activity levels of the individuals.

3) RESEARCH/ORAL PRESENTATION/ FHA/HERO



Have students research information on sports nutrition and then create a list of topics related to sports nutrition. Review with students the importance of using reliable nutrition resources. Divide students into teams and have each team prepare an illustrated talk on aspects related to nutrition and activity levels, sports nutrition, etc. Encourage students to investigate a variety of media for use in their presentations (e.g., videos, television clips, flip charts, posters, slides, etc.). Have each team present their illustrated talk to the class.

NOTES

TA 39 *Assessing the Nutritional Needs of Individuals at Various Activity Levels*



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NOTES



FHA/HERO ACTIVITIES

- Student Body
- Skills for Life
- STAR Event: Illustrated Talk
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

AGENCIES AND ORGANIZATIONS

American Dietetic Association

American College of Sports Medicine

American Council on Exercise

American Alliance for Health, Physical Education, Recreation, and Dance

Fifty-Plus Fitness Association

International Center for Sports Nutrition

President's Council on Physical Fitness and Sports

YMCA of the USA

Women's Sports Foundation

BOOK

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

WEB SITES

American Dietetic Association
www.eatright.org

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

Food and Nutrition Information Center/USDA
www.nal.usda.gov/fnic/

4D - The student is expected to use available technology to compare personal food intake to recommended guidelines.

4E - The student is expected to interpret nutrition assessment data from available technology.

TEKS 4E also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Have students read reference materials that describe nutrition assessment data tools available for consumers. Bookstores, computer stores, and educational catalogs have information on this type of software. An Internet search would be beneficial if computers are available. Have students select one nutrition assessment tool and write a descriptive summary regarding the functions it performs. Have students present their findings to the class.

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KEY QUESTIONS

- What is the most important feature of the nutrition assessment tool you selected?
- Of all the nutrition assessment tools investigated, which one would be the best selection for the Nutrition and Food Science classroom?
- Which would best serve individual consumers wishing to improve the nutritional value of meals prepared at home and to make wise food choices when eating away from home?

2) INDIVIDUAL OR GROUP ACTIVITY



Obtain lunch menus from your school cafeteria. Select one menu for students to use with available nutrition assessment tools. Have students analyze the lunch menu using the nutrition analysis program. Have students investigate the variety of functions performed by the software. Technology tools could include computer programs or assessment data found on the Internet.



KEY QUESTIONS

- What nutrition assessment data is available from these tools?
- How are these tools beneficial to you as a consumer?

3) INDIVIDUAL ACTIVITY

Instruct students to write down everything they ate yesterday. Have students use a nutritional analysis software program to analyze their day's food intake. It may be necessary for students to conduct an Internet search to find food compositions of common restaurant items, especially those found at fast food restaurants. Students should then

TA 21 *Recommended
Dietary
Allowances*



NOTES

TA 23 *Food Guide Pyramid*

TA 40 *Nutrition Assessment of Personal Food Intake*

TAAS
MATH

TA 41 *Scenario*

compare the nutritional analysis for their intake with the **Recommended Dietary Allowances** (Teaching Aid 21) and the **Food Guide Pyramid** (Teaching Aid 23) to determine whether their day's intake met the recommended amounts of nutrients and followed the recommendation of the Food Guide Pyramid. Have students use Teaching Aid 40, **Nutrition Assessment of Personal Food Intake**, to assist them in calculations. Ask student volunteers to share their findings with the class.



4) INTERNET SEARCH/SCENARIO/TEAMWORK

Have students use the Internet, textbooks, and library resources to research information regarding special diets (e.g., low-sodium diets, low-fat diets, and weight-loss diets). Have students work in pairs to select one diet and assume the role of a dietitian. Distribute copies of Teaching Aid 41, **Scenario**, to students. The dietitian is required to explain the diet to a new patient and show the patient how the new diet follows recommended dietary guidelines based on the individual's health needs. Have students assume that the patient knows very little about how to follow such a diet and, in fact, is resistant to the notion of changing eating habits. The dietitian should develop sample menus for a day and use a nutritional analysis computer program to verify that the menu plan follows the prescribed diet. Ask the students, still working in pairs, to write a dialogue between the dietitian and the patient. The dietitian must convince the patient of the necessity to convert to this type of diet and explain the procedures to follow. Have students present their dialogue to the class. Follow-up with a class discussion on the concepts presented.

KEY QUESTIONS

- What special diets were presented?
- What type of health problems would indicate an individual should seek medical advice regarding a special diet?
- What benefits would result from the patient's following the diet?
- What consequences might result from failure to follow the diet in each case?
- What were some techniques the dietitians used to convince patients to accept the new diet?

RESOURCES

WEB SITES

American Dietetic Association

www.eatright.org

Food and Nutrition Information Center/USDA

www.nal.usda.gov/fnic/

Nutrition Counseling Education Services

www.ncscatalog.com

4F- The student is expected to utilize decision-making skills to improve eating habits, exercise, and management of optimum weight.

1) PROBLEM SOLVING/WRITTEN EXERCISE/CLASS DISCUSSION

Using Teaching Aid 42, *The Nutrition Advisor*, have students assume the role of a nutrition advisor by answering the letters written to them. Emphasize to students that their responses should be based on comprehensive use of information they have learned about nutritious food sources, functions of the nutrients, individual needs, and the role of nutrition in managing health and wellness. Have student volunteers share their responses. Use the student responses as a springboard for a class discussion on decision-making skills needed to improve eating habits, exercise, and management of optimum weight. Use Teaching Aid 43, *Steps in Decision Making*, as an aid to the discussion.

2) PROJECT/WRITTEN EXERCISE

Have students write the words Eating Habits, Exercise, and Management of Optimum Weight, on a sheet of paper, allowing space to write between each title. Instruct students to briefly describe their eating habits, exercise routine, and ways they maintain their optimum weight. (This information is personal and for student use only.)

Based on what students have learned about nutrition and wellness and through sound decision making, have students write a proposal for a good health regimen that would improve their eating habits, exercise, and management of optimum weight. The proposals should be supported by rationale and reliable nutrition information. Discuss with students how periodic evaluation of personal eating habits and exercise routines are important for maintaining health and wellness throughout the life span.

3) PROJECT/ FHA/HERO

Have chapter members develop a plan for helping improve health and wellness of their family members by working with family members to plan and prepare nutritious meals and snacks. Have chapter members plan strategies to help family members include exercise in their daily routines (e.g., family members exercise and plan recreational activities together, FHA/HERO member agrees to be "walking buddy" for parents).

NOTES

TA 42 *The Nutrition Advisor*

TA 43 *Steps in Decision Making*

**TAAS
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FHA/HERO ACTIVITIES

- Families First: Meet the Challenge
- Power of One: A Better You
- Student Body - Chapter members present programs for other student organizations on nutrition and wellness or write a "To Your Health" series for the school newspaper.

RESOURCES

WEB SITES

American Dietetic Association
www.eatright.org/

Dairy Council
www.familyfoodzone.com/

Food and Nutrition Information Center
www.nal.usda.gov/fnic/

Nutrition Navigator from Tufts University
navigator.tufts.edu

CDC Nutrition and Physical Fitness programs
www.cdc.gov/needphp.dnpg

Nutrition and Food Science

Knowledge and Skills.

(5) Influences on food choices.

The student evaluates influences on food choices.

The student is expected to:

- (A) identify ways food satisfies psychological and social needs;
- (B) discuss the role peer pressure and media play in food selections;
- (C) describe family eating patterns;
- (D) compare past, current, and future family eating patterns;
- (E) determine environmental influences on food choices;
- (F) propose ways nutritional needs may be met by individuals in self-care, including children, older adults, and persons with special needs; and
- (G) evaluate the most efficient use of fast foods and convenience foods as nutrition sources.

5A- The student is expected to identify ways food satisfies psychological and social needs.

1) CLASS DISCUSSION/INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Discuss with students ways food satisfies psychological and social needs. While food is essential to survive, food is also a source of pleasure and satisfaction to most people. Instruct students to draw a line down the center of a sheet of paper. On the left side, have them write psychological needs and on the right side, have them write social needs. Instruct students to list in the left column at least 10 ways food satisfies psychological needs and list in the right column at least 10 ways food satisfies social needs. Have students share their responses. Discuss with students the positive and negative aspects of the ways food satisfies psychological and social needs.

NOTES

KEY QUESTIONS

- What are examples of how food is provided in the following settings?
 - family
 - school
 - peer groups
 - church
 - community
- What needs, other than physical needs, does food meet in each of the settings listed above?
- What is the importance of food in each of the settings?

2) CLASS DISCUSSION/INDIVIDUAL ACTIVITY

Using Teaching Aid 44, *Internal and External Influences on Food Choices* as a handout or transparency, discuss with students the many factors influencing food choices. The factors may vary from person to person or group to group. Have students complete the worksheet on Teaching Aid 45, *Rating Influences on Food Choices*.

KEY QUESTIONS

- Are the food choices you make more likely the result of internal or external influences? Why?
- Why should you be aware of factors that influence your food choices?
- Which of the factors are more likely to lead to healthy food choices?
- Which of the factors are more likely to lead to unhealthy food choices?

TA 44 *Internal and External Influences on Food Choices*

TA 45 *Rating Influences on Food Choices*

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NOTES

RESOURCES

PUBLICATION

American Cancer Society. *Changing the Course, K-12 Nutrition Curriculum*, 1990.

WEB SITE

American Cancer Society
www.cancer.org

5B- The student is expected to discuss the role peer pressure and media play in food selections.

1) CLASS DISCUSSION

Discuss with students that food provides the essential nutrients needed for good health, but each individual is responsible for making wise food choices. The media is one of the most influential sources of information about food. Businesses spend millions of dollars each year promoting their products in an effort to influence consumer purchases. Students must learn to make wise food choices in order to obtain the essential nutrients from their diet. Have students find food advertisements in magazines and describe those on television.

Display Teaching Aid 46, **Advertising Techniques That Influence Food Selections**, on the overhead projector. Using the food advertisements students have selected, have the class decide which of the advertising techniques listed are being used to encourage consumers to buy the product.

KEY QUESTIONS

- What is the main message of the advertisement?
- What is the target audience?
- How effective is the advertisement?

Have students draw conclusions about the factors that influence their food choices, especially from the media and peers.



2) GROUP ACTIVITY/CASE STUDIES

Divide the students into five groups; assign each group one of the case studies from Teaching Aid 47, **The Impact of Peer Pressure on Food Choices**. Distribute a copy of Teaching Aid 48, **Problem Solving**, and Teaching Aids 49a and 49b, **Solving Problems Through Effective Reasoning**, to each group. Have students use the REASON model for problem solving to arrive at solutions for the character in their case study. (You may need to review this process with the students before they break into groups.)

KEY QUESTIONS

- Do peers have an influence on food choices? Why?
- What are the advantages and disadvantages of peer influences on food choices?

Have students write a two-paragraph summary; one paragraph should describe the role peer pressure plays in their personal food selections, and the second paragraph should describe the role the media plays in their personal food selections.

NOTES

TA 46 Advertising Techniques That Influence Food Selections

TA 47 The Impact of Peer Pressure on Food Choices

TA 48 Problem Solving

TA 49a & 49b Solving Problems Through Effective Reasoning

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RESOURCES

5C- The student is expected to describe family eating patterns.

1) CLASS DISCUSSION/SURVEY

Discuss with students that in today's world there are increasing demands and pressures that may keep families from following a traditional meal pattern (e.g., breakfast and dinner eaten at home). Some families members may eat only lunch and dinner, others may never actually eat meals, but snack most of the day.

KEY QUESTIONS

- How do family members with irregular eating patterns meet nutritional needs?
- How does a routine family eating pattern help family members meet nutritional needs?

Distribute two copies of Teaching Aid 50, *Family Eating Patterns Survey*, to each student. Have students survey at least two other people (one adult and one teen). Have students return the surveys, and as a class, tally the responses. (Identity of persons completing the survey, including students, should remain anonymous.)

KEY QUESTIONS

- What trends do you see in family eating patterns?
- How do the various eating patterns allow for adequate nutrition?

2) CLASS DISCUSSION/WRITTEN EXERCISE

Lead a class discussion on whether the views on nutrition held by a family unit have an impact on individual family members. As a follow-up activity to the discussion, have students complete Teaching Aid 51, *How Do You Think A Family's Views on Nutrition Affect Food Habits?*.

KEY QUESTIONS

- How do a family's views on nutrition impact individual family members?
- With the knowledge you have acquired about nutrition in this course, what eating patterns do you predict you will establish for your family of the future (you as a spouse and parent)? Why?

NOTES

TA 50 *Family Eating Patterns Survey*

TA 51 *How Do You Think A Family's Views on Nutrition Affect Food Habits?*

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NOTES



FHA/HERO ACTIVITIES

- Chapter Activity - Guest speaker such as a dietitian or nutrition educator to speak on family eating patterns.
- STAR Event: Illustrated Talk on family eating patterns or influences on food choices.
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

5D- The student is expected to compare past, current, and future family eating patterns.

1) CLASS DISCUSSION

Display Teaching Aid 52, *Eating Patterns: Past-Present-Future*, on the overhead projector. Lead a class discussion on the similarities and differences of meal patterns from the 1940s as compared to the present.

KEY QUESTIONS

- What accounts for the differences in the types of foods that were eaten in the 1940s from those common today?
- What differences exist between "where and with whom family members eat their meals" today as compared to "where and with whom family members ate their meals" in the 1940s? What accounts for these differences?
- In 1942, what factors in society contributed to eating patterns?
- What factors in society have contributed to common eating patterns of today?

Have students predict what eating patterns of the future might be like (the early part of the 21st century); have a student volunteer write the predictions in the space allowed at the bottom of Teaching Aid 52.

KEY QUESTIONS

- What societal factors likely might account for changes in current and future eating patterns?
- What societal factors do you predict will contribute to this being a representative meal pattern in 2020?



2) GROUP ACTIVITY/WRITTEN EXERCISE

Discuss with students how looking at books from the past can reveal all kinds of information about society, culture, and common practices during the era when the book was written. Locate old cookbooks such as *Better Homes and Gardens* or *Betty Crocker*, as well as newer versions of these books. Divide the class into groups, and have each group compare an old version and a newer version of each cookbook. Distribute a copy of Teaching Aid 53, *Compare and Contrast*, to each group. Assign each group something different to compare such as:

- types of recipes
- variances in the ingredients and names for ingredients (e.g., oleo versus margarine)
- equipment used (e.g., hand chopping versus food processor)
- preparation and serving methods

NOTES

TA 52 *Eating Patterns: Past-Present-Future*

**SOCIAL
STUDIES**

TA 53 *Compare and Contrast*

**SOCIAL
STUDIES**

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NOTES

- overall design of the book (e.g, titles of sections, size of print, number of pictures and other illustrations, readability, ease of use, etc.)

Have groups complete the worksheet and then report to the class. Use the information presented to lead a class discussion on past, current, and future eating patterns.

KEY QUESTIONS

- What differences in the two editions of the books are most obvious?
- What are the similarities between the two editions?
- What do these comparisons tell us about past and current eating patterns?
- What changes do you expect to see in future cookbooks?
- What impact could societal factors such as home-based enterprises, telecommuting, or home schooling have on future family meal patterns?



FHA/HERO ACTIVITIES

- Families First: Families Today
- Power of One: Family Ties

RESOURCES

5E- The student is expected to determine environmental influences on food choices.

1) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Distribute copies of Teaching Aid 54, *Environmental Influences on Food Choices*, to students. Have students brainstorm factors related to these environmental influences such as those provided as an example. (You may choose to make a transparency of Teaching Aid 54 and do this as a class activity.) Have students share the information they recorded on their web diagrams. Lead a class discussion regarding the results of the influences on daily food choices and long term health and wellness.

KEY QUESTIONS

- What are other environmental influences on food choices that are not listed?
- What are the results of these influences on daily food choices?
- What are the results of these influences on long term health and wellness?
- What can we do to motivate ourselves and others to make wise food choices in light of these environmental influences?

2) PROJECT/ FHA/HERO

Have students record the following information for one week:

- all the food they eat, including meals and snacks
- the amounts eaten
- the time of day
- place where food was eaten
- people they ate with or if they ate alone
- their feelings when the foods were selected

Make multiple copies of Teaching Aid 55, *Food Record*, for students to record their information or have them use the format to record the information on notebook paper. At the conclusion of the week, have students use their Food Record to draw conclusions about the factors that influenced their food choices. Have students look for any consistent eating patterns that lead to unhealthy food choices (e.g., snacking while watching TV with no awareness of the amount eaten). Have students write a summary of the environmental influences on their food choices and make suggestions that would improve their nutritional health.

Instruct students to set goals to improve their nutritional health and to make wiser food choices by using the FHA/HERO planning process. Have students keep a record of their progress toward those goals for one month.

NOTES

TA 54 *Environmental Influences on Food Choices*

TA 55 *Food Record*

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NOTES



FHA/HERO ACTIVITY

- Power of One: A Better You
- Student Body

RESOURCES

BOOK

Future Homemakers of America, Inc., 1997. *Power of One*.

5F- The student is expected to propose ways nutritional needs may be met by individuals in self-care, including children, older adults, and persons with special needs.

1) GROUP ACTIVITY/CLASS DISCUSSION



Distribute Teaching Aid 56, *Making the Menu Fit the Family*. Discuss with students that nutrient and calorie needs vary from person to person, depending on age, gender, body size, and activity level. The Teaching Aid provides planning tips for different family members. Starting with the introduction, have students read a paragraph or a section of the Teaching Aid at a time. Have students highlight or underline information that should be emphasized.

2) BRAINSTORMING/CLASS DISCUSSION



Have students brainstorm and list what circumstances exist that create self-care situations for individuals, especially children, older adults, and persons with special needs. Some examples include:

- latchkey children
- older adults living alone
- adults with disabilities in self-care a portion of the day

KEY QUESTION

- What might be some viable strategies and resources for meeting nutritional needs in each of these circumstances?

Some examples of strategies and resources include:

- Meals on Wheels
- family member preparing "TV dinners" for the freezer
- family member or friend doing meal planning and grocery shopping
- preparing after-school snacks in advance
- preparing school lunches and pre-preparation of breakfast items the night before (e.g., getting out utensils and cereal boxes, pouring milk in the bowl, covering with foil, and setting on low shelf in the refrigerator where young children can reach)
- preparing a "snack pack" with nonperishable food items that a child or adult in self-care can prepare for themselves, etc.

3) GROUP ACTIVITY/SCENARIOS



Divide students into small groups and distribute Teaching Aids 57a and 57b, *Meeting Nutritional Needs of Those in Self-Care*, to each group. Have students respond to the questions and then identify strategies and resources for accommodating the nutritional needs of the individuals described in the scenarios. Have students share their responses with the class.

NOTES

TA 56 *Making the Menu Fit the Family*

TA 57a & 57b
Meeting Nutritional Needs of Those in Self-Care

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FHA/HERO ACTIVITIES

- STAR Event: Illustrated Talk on meeting nutritional needs of those in self-care
- Community Service - Work with children in elementary school or in home for older adults to help them learn about good nutrition and how to meet their nutritional needs.
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

BOOK

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide.*

WEB SITES

American Dietetic Association (ADA)
www.eatright.org

American Heart Association
www.americanheart.org

American Cancer Society
www.cancer.org

Cooperative Extension Service, Kansas State University
www.oznet.ksu.edu/ext-f&n

5G- The student is expected to evaluate the most efficient use of fast foods and convenience foods as nutrition sources.

1) BRAINSTORMING/TEAMWORK/VISUAL DISPLAY



Instruct students to fold a sheet of notebook paper in half lengthwise to form two columns. Have the students label one column "Fast Foods" and the other column "Convenience Foods." Lead students in brainstorming examples of both fast foods and convenience foods. Discuss with students how these foods were once considered "special" foods and were only used for special occasions. For example, "TV dinners" were once thought of as something purchased on a special evening every once in awhile, and eating out was reserved for special occasions.

KEY QUESTIONS

- How are fast foods and convenience foods utilized in our society today?
- What societal factors have influenced the more common use of fast foods and convenience foods in day-to-day meal planning?
- How can fast foods and convenience foods be used efficiently as part of a day's balanced meals and to meet nutritional needs?

Have some students collect menus from fast food restaurants and bring them to class. Have the other students collect labels from convenience foods or visit a grocery store to compile a list of some convenience foods available and their nutritional value. Divide students into teams. Assign half of the teams to prepare a list of suggestions for efficiently using fast foods as part of a day's food intake and to meet nutritional needs, and assign the other half of the teams to prepare a list of suggestions for efficiently using convenience foods as part of a day's food intake and to meet nutritional needs. Have students copy their lists onto large sheets of construction paper and display in the classroom, or have students use computer word processing software to design and print their lists. Have each team explain their list to the class.

2) CLASS DISCUSSION

Display Teaching Aid 58, *Eating Away From Home*, on the overhead projector. Lead a class discussion regarding these guidelines and have students suggest additional guidelines to add to the list.

KEY QUESTION

- How can individuals manage calorie intake and meet nutritional needs when eating many meals away from home?

NOTES



TA 58 *Eating Away From Home*

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NOTES

3) LABORATORY EXPERIENCE

Divide students into laboratory groups. Assign each group a type of convenience food item available from the grocery store to prepare and taste test. Have students compare taste, quality, nutritive value, and cost. Some suggested convenience foods items that students might prepare include:

- two different brands of fried chicken frozen dinners
- two different brands of Mexican or Chinese frozen dinners
- two different brands of ready-to-eat spaghetti sauce
- two different brands of canned chili
- two different brands of boxed macaroni and cheese dinners
- two different brands of soups (canned or canned and dehydrated)
- two different brands of frozen chicken pot pie

Have students write an evaluation of their two products and then present the information orally to the class.

KEY QUESTION

- Which products provide individuals with good nutrition along with convenience for today's busy family members?

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.



FHA/HERO ACTIVITIES

- Families First project - Visual display or flyer based on suggestions for making wise nutritional choices when eating away from home
- Power of One: A Better You
- Student Body

RESOURCES

WEB SITE

Food Finder

[www.olen.com/food](http://www olen.com/food)

Nutrition and Food Science

Knowledge and Skills.

(6) Influences on food choices.

The student exhibits an awareness of the variety of food choices available in our multicultural society.

The student is expected to:

- (A) analyze food customs of the community;
- (B) explain the integral role food plays in family traditions, special occasions, religious events, and holiday celebrations;
- (C) adjust traditional recipes to improve nutritional quality; and
- (D) determine the effects of regional agriculture and technology on food choices.

6A- The student is expected to analyze food customs of the community.

1) CLASS DISCUSSION/INTERVIEW/INDIVIDUAL ACTIVITY

Discuss with students how food customs of the community vary from one community to another. Have each student choose a local restaurant in the community from the telephone book. Have students interview the owner or manager by telephone or in person. Have students use Teaching Aid 59, *Community Food Customs*, to guide the interview.

Arrange the classroom in a "conference room" format where students are facing one another, such as around one large table or with their desks in a circle. Several tables could be pushed together to form a large conference table. Have students assume that they work for a marketing company whose assignment is to analyze the food customs of the community. As "marketing specialists," they are going to share the results of their interviews with the rest of the company "staff." Either a student or the teacher should act as company vice president and moderator.

KEY QUESTIONS

- What conclusions can you draw regarding food customs in this community?
- What influences a community's food customs?
- How do these customs evolve?

2) CLASS DISCUSSION/LABORATORY EXPERIENCE/ FHA/HERO

Lead a class discussion on community events that involve food, such as:

- fairs
- festivals
- celebrations
- school events
- church events
- events sponsored by civic organizations
- business promotions and contests

KEY QUESTIONS

- What role does food play in each of these events?
- How is the types of foods served at these events related to food customs of the community?
- What influence do you as a high school student have on foods customarily served at these events?

NOTES

TA 59 *Community Food Customs*

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NOTES



As an FHA/HERO activity, have students volunteer to assist with food preparation and service at a community event (e.g., students may volunteer to provide refreshments for a reception following an elementary school program, to assist a civic organization with a food booth at a fair or festival, to operate a FHA/HERO food booth at a special community event serving foods customary of the community, etc.).

If needed, have students plan a laboratory experience to develop skills in preparing food items for the community service activities.

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.



FHA/HERO ACTIVITIES

- Community Service Award
- Power of One: Take the Lead; Speak Out for FHA/HERO
- STAR Events: Chapter Service Project, Entrepreneurship

RESOURCES

6B- The student is expected to explain the integral role food plays in family traditions, special occasions, religious events, and holiday celebrations.

1) BRAINSTORMING/RESEARCH/Written EXERCISE



Guide students to brainstorm events such as special occasions, religious events, holiday celebrations, and family traditions where food plays an integral role. Examples of events include:

- birthday or anniversary celebrations
- Thanksgiving
- July 4th, Independence Day
- Kwanzaa
- Chinese New Year
- Oktoberfest
- St. Patrick's Day
- Cinco de Mayo
- Hanukkah
- Christmas
- Easter
- Lent
- St. Joseph's Day

Have students select a special event or holiday, research it, and write a summary of the event answering the following questions:

- How does food play an integral role in the celebration of this occasion?
- What is the significance of the specific food items associated with this occasion?

As students are researching information for their summaries, have them collect recipes and include them in their written report. Some of these recipes will be used in Strategy 2 below. Have students use computer word processing software to produce their reports.

Distribute copies of Teaching Aid 60, *St. Patrick's Day*, to students as an example of the writing exercise. Have students organize a class book or file on the role food plays in family traditions, special occasions, religious events, and holiday celebrations.

2) LABORATORY EXPERIENCE

Divide students into laboratory groups. Have students use selected recipes directed at family traditions, special occasions, religious events, or holiday celebrations from the research and written exercise in Strategy 1 above for a laboratory experience. After the various foods have been prepared, have students explain to the class details about the special occasion, holiday, or celebration, why the food item is characteristic of the event, and the integral role food plays in the event. Have students arrange for their classmates to sample their food items.

NOTES

TA 60 *St. Patrick's Day*

TAAS
READING

TAAS
WRITING

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

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NOTES



FHA/HERO ACTIVITIES

- Families First: Families Today
- Power of One: Family Ties
- Japanese Exchange Program

RESOURCES

BOOKS

Smith, Jeff, 1990. *The Frugal Gourmet On Our Immigrant Ancestors*.

The University of Texas Institute of Texan Cultures at San Antonio, 1989.
The Melting Pot: Ethnic Cuisine in Texas.

6C- The student is expected to adjust traditional recipes to improve nutritional quality.

1) CLASS DISCUSSION/LABORATORY EXPERIENCE

Review with students Teaching Aid 24, *Nutrition and Your Health: Dietary Guidelines for Americans*. Distribute Teaching Aid 61, *An Easy Recipe Makeover*, to students or display on the overhead projector. For example, the original recipe is high in fat, cholesterol, and sodium.

KEY QUESTION

- How has the original recipe been changed to make it lower in fat, cholesterol, and sodium, yet higher in fiber, vitamins A and C?

Display Teaching Aid 62, *Nutrition in the Kitchen*, on the overhead projector. Discuss with students ways the recipe could be adjusted to improve the nutritional quality. Remind them of the *Dietary Guidelines for Americans* and suggestions for substituting ingredients to improve the nutritional quality of the dish.

Divide students into laboratory groups. Have each group prepare the original recipe discussed above and the adjusted recipe. If needed, have students halve the recipe for tasting. Instruct students to taste and evaluate each dish. Have a student volunteer record student reactions and comments regarding the taste and appearance of each dish.

KEY QUESTIONS

- How did the two dishes differ in taste?
- How did the two dishes differ in appearance?
- What are the nutritional benefits of the adjustments made to the original recipe?

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

2) INDIVIDUAL ACTIVITY

Have students bring a copy of their favorite recipe to class. Instruct students to use food composition tables from classroom textbooks, the USDA Web site, or other resources to complete a nutritional analysis of the original recipe. Students also may use Teaching Aid 8a-8c, *Food Composition Table*, which lists the nutrient composition of selected food items. Instruct students to adjust the recipe to improve the nutritional quality. Check for student understanding and progress. Have students complete another nutritional analysis for the adjusted recipe and compare the two analyses.

NOTES

TA 24 *Nutrition and Your Health: Dietary Guidelines for Americans*

TA 61 *An Easy Recipe Makeover*

TA 62 *Nutrition in the Kitchen*

SCIENCE

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TA 8a-8c
Food Composition Table

SCIENCE



NOTES

Have students use computer dietary analysis software, if available,

KEY QUESTION

- How did the adjustments to your original favorite recipe improve the nutritional quality of the product?



FHA/HERO ACTIVITIES

- Skills for Life
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

BOOKS

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

Gershoff, Stanley, 1990. *The Tufts University Guide to Total Nutrition*.

WEB SITES

American Dietetic Association
www.eatright.org

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

USDA Food Composition Data
www.nal.usda.gov/fnic/foodcomp/

6D- The student is expected to determine the effects of regional agriculture and technology on food choices.

1) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Have students read references that provide information on the influence of regional agriculture on food availability, food costs, and food choices in the United States. Have students share their findings with the class. Lead a class discussion on the relationship of regional agriculture to food choices, food costs, and food availability. NOTE: Emphasize that the geographic location where an individual lives has an impact on what foods are available, when these foods are available, the cost of the food items, and the foods commonly consumed in a particular area. For example, Mexican foods are popular in the southwestern portion of the United States, barbecue is popular in Texas, and fresh seafood is popular along the Texas coastal areas.

KEY QUESTIONS

- How does regional agriculture impact the cost of food products?
- What are examples of how regional agriculture impacts food cost?
- How does geographic location influence food choices? What are some examples?
- What is the relationship between food availability and regional agriculture?

2) CLASS DISCUSSION/LABORATORY EXPERIENCE

Lead a class discussion on the availability of certain food products as a result of advances in food technology. Blueberries are an example of a food product made available year round because of advances in production and preservation techniques. Blueberries are considered a valuable part of a nutritious diet, especially due to their antioxidant activity. According to Jean Mayer, USDA Human Nutrition Research Center on Aging at Tufts University, blueberries are ranked number one in antioxidant activity when compared with forty other fruits and vegetables. Antioxidant activity refers to a food's ability to neutralize free radicals (unstable oxygen molecules). Free radicals have been associated with many health risks including cancer and heart disease. Foods high in antioxidant activity are considered to be an important part of a healthy diet.

Using blueberries as an example, lead a class discussion on seasonal food availability, geographic locations where seasonal foods are produced, and how technology has affected the availability and year round costs of these products. For example, without technology, Wild Maine blueberries would not be available in Texas. Have students visit Web sites such as the Wild Blueberry Association of North America and others to gather additional nutritional information, recipes, and suggestions for including blueberries in the daily diet.

NOTES

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STUDIES

SCIENCE

SOCIAL
STUDIES

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NOTES

As an enrichment activity, have students prepare Blueberry Muffins or have them select a variety of products to prepare using blueberries. After the lab experience, have students share their reactions to product packaging, preservation methods, flavor, and palatability of the various products prepared in class.

KEY QUESTIONS

- What are other food products that are available to consumers in the United States due to technological advances in food production and preservation?
- How does technology impact nutritional value and palatability of these food products?
- How does regional agricultural and technology affect the cost of these food products?

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

RESOURCES

WEB SITES

Texas Agricultural Extension Service
agweb.tamu.edu/

Wild Blueberry Association of North America
www.wildblueberries.com/
www.realblueberries.com/

Nutrition and Food Science

Knowledge and Skills.

(7) Food management skills.

The student applies management principles in meeting nutritional needs.

The student is expected to:

- (A) describe a variety of consumer food-buying strategies;
- (B) analyze the influence of advertising on consumer buying;
- (C) read and interpret food labels;
- (D) relate the effects of work space, tools, equipment, and technology on food preparation;
- (E) determine ways family members assuming multiple roles can apply food management skills;
- (F) analyze food costs and budgeting needs;
- (G) design a variety of daily menus; and
- (H) determine how technological advancements have impacted the nutritional value of foods.

7A- The student is expected to describe a variety of consumer food-buying strategies.

1) BRAINSTORMING/CLASS DISCUSSION



Write the following statistics on the board:

- Half of all grocery store purchases are impulse selections.
- Most consumers dislike grocery shopping; only 30 percent of individuals surveyed like to shop for food.

KEY QUESTION

- What do these statistics tell us about the need for consumer education regarding food-buying strategies?

Draw three columns on the board. Title the three columns Consumers, Economy, and Society. Have students brainstorm and list consequences of impulse food buying for consumers, the economy, and society. Distribute copies of Teaching Aid 63, *Ten Steps to Supermarket Savvy*, to students. Explain how each of the suggestions can help you get the most for your money and avoid impulse purchases.

KEY QUESTIONS

- What are the advantages of comparison shopping for food?
- Is it possible to eat nutritiously with less expensive foods as with expensive food items? Why?
- Which of these strategies would you be most likely to use? Why?
- Which of these strategies would be difficult for you to use? Why?

2) GROUP ACTIVITY/PROJECT



Divide students into small groups. Have each group create a scenario of a family and establish a weekly budget for food for this family. Using food advertisements, the Food Guide Pyramid, and nutritional needs of family members, have each group develop a menu plan for the week. Students should determine how often the family will eat out, pack lunches, or buy lunches at school.

Have students use the menus they developed to make a grocery shopping list. Arrange for students to visit a grocery store with their shopping lists and complete the activities on Teaching Aid 64, *Consumer Food Buying*.

Following the shopping experience, have each group present their scenario, food budget, and whether they were able to stay within their budget to the class. Have students explain the criteria they used to establish the food budget for the family in their scenario.

NOTES

TA 63 *Ten Steps to Supermarket Savvy*

TA 64 *Consumer Food Buying*

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MATH**

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3) PROJECT/ FHA/HERO

Have students assist with the family grocery shopping responsibility for one week. Students should make menus for the week, considering nutritional needs of their family, food preparation skills, and food likes and dislikes. Staying within the guidelines of the family food budget, have students develop a shopping list and comparison shop at the grocery store. Students should work with a parent or guardian as appropriate. Have students keep a record of their purchases and write a short paper evaluating their experience and shopping skills.

KEY QUESTIONS

- What were your goals for this project?
- Which food buying strategies did you use during this project?
- Which food buying strategies will you continue to use? Why?
- Did you accomplish your goals? Why?
- What have you learned from this project?

*Have students use the FHA/HERO planning process to assist them in organizing their project.

FHA/HERO ACTIVITIES

- Financial Fitness: Consumer Clout
- Families First: Balancing Family and Career
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

PUBLICATION

Future Homemakers of America, Inc., 1993. *Financial Fitness*.

VIDEOTAPE

Grocery Shopping Survival, available from the Home Economics Curriculum Center.

7B- The student is expected to analyze the influence of advertising on consumer buying.

1) GROUP ACTIVITY



Divide students into small groups. Provide students with a copy of Teaching Aid 65, *Types of Appeals Used in Food Advertising*, and copies of magazines that contain food advertisements. Have students find examples of five types of appeals used in food advertising from the list of appeals on Teaching Aid 65. Have students label each advertisement with the type of appeal and attach to poster board or individual sheets of paper. Have students show their advertisements to the class and explain the way the advertisement is used to appeal to consumers.

2) GROUP ACTIVITY/WRITTEN EXERCISE



The most important appeal in a food advertisement is sometimes referred to as the "hook." Have students work with their groups from Strategy 1 above to complete Teaching Aid 66, *The "Hooks" in Food Advertising*. Instruct students to use their five advertisements to assist them in completing Teaching Aid 66. When all groups have finished, have individual groups share their advertising "hooks" with the class.

KEY QUESTIONS

- What is the purpose of advertising?
- What types of advertising appeal to teenagers? to young children? to parents? to older adults?
- Do you consider advertising to be an accurate source of information? Why?
- How often do you depend on advertising to help you make consumer purchasing decisions?

3) EDUCATIONAL TOUR

Arrange for students to take an educational tour to a grocery store. Ask the store manager to explain and show students how advertising is used in the supermarket to influence consumer food purchases. If the store manager is not available, have students go on a supermarket scavenger hunt searching for examples of advertising and marketing strategies that influence consumer food purchases.

KEY QUESTIONS

- How many of the advertisements and marketing strategies were from manufacturer's? What are some examples?
- How many of the advertisements and marketing strategies were from the local store?

NOTES

TA 65 *Types of Appeals Used in Food Advertising*

TA 66 *The "Hooks" in Food Advertising*

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NOTES

TA 67 *Advertisements and the Media*



4) CLASS DISCUSSION/VIDEOTAPE/WRITTEN EXERCISE

Lead a class discussion regarding advertising on television targeted at special groups, especially children. Videotape at least three food advertisements on television. (Saturday morning is an excellent time to tape examples of advertisements directed at children.) Distribute copies of Teaching Aid 67, *Advertisements and the Media*, to students. Have students complete the worksheet as they watch the television advertisements. Following the exercise, discuss with students how consumers are influenced by this type of advertising.

KEY QUESTIONS

- Why does the food industry advertise on television?
- What are some food advertisements that appeal to you? Why?
- What methods do advertisers use to appeal to children?
- What types of foods are used in advertisements shown during children's programs?
- What effect does food advertising have on children's attitudes toward food?
- How can parents combat the effects of advertising aimed at their children?

FHA/HERO ACTIVITY

- STAR Event: Illustrated Talk

RESOURCES

7C- The student is expected to read and interpret food labels.

1) CLASS DISCUSSION/DEMONSTRATION

Instruct students to bring one food label to class. Display Teaching Aid 68, **Food Label**, on the overhead projector and discuss with students how to read the label. Use Teaching Aid 69, **Components of a Food Label**, to assist in the explanation of the components of food labels.

Display several food products for students. Have student volunteers pour out a typical serving size of each food product (typical for teens). Next, have the student volunteers measure out the serving size listed on the package and compare to the first portion.

KEY QUESTION

- Why is the serving size information on the label important?

Next, have students read the Percent Daily Value for each nutrient on the label and point out any nutrient or health claims on the labels. Display Teaching Aid 70, **Food Label Claims**, on the overhead projector. Discuss with students what is meant by each of these claims.

KEY QUESTIONS

- Why is it important to know and understand food label claims?
- How does the information on the food label help individuals in implementing the Food Guide Pyramid and Dietary Guidelines?
- What types of information found on food labels is most helpful to you as a consumer?
- How can you use the food label information in making wise consumer food purchases?
- Why is nutrition labeling information required by law?

2) RESEARCH/WRITTEN EXERCISE/LABORATORY EXPERIENCE

Display Teaching Aid 71, **Supermarket Shopping Terms**. Have students use textbooks and other resources to define each of the terms. Divide the class into laboratory groups and have each group examine three different brands of the same food item, e.g., store brand corn flakes, name brand corn flakes in a box, and corn flakes sold in less expensive packaging (i.e., plastic bag). Have students taste test the three different brands of their product and evaluate for taste, appearance, quality, and cost. Have students identify the terms defined earlier on the packaging for each of their products.

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

NOTES

TA 68 **Food Label**

TA 69 **Components of a Food Label**

TA 70 **Food Label Claims**

TA 71 **Supermarket Shopping Terms**

TAAS
READING

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NOTES

TA 69 *Components of a Food Label*

TA 72a & 72b
Brochure Assessment

TAAS
READING

TAAS
WRITING



3) GROUP ACTIVITY/PROJECT

Have students use available computer software programs to create a brochure explaining the food label and its required components. Make copies of Teaching Aid 69, *Components of a Food Label*, and distribute to students to use in their brochures. Students should find a food label to be used in their brochure that exemplifies the required components. Other information can be included in the brochures including health claims and label claims such as, calorie free, low fat, and high fiber. Display student brochures in the classroom.

Use Teaching Aids 72a and 72b, *Brochure Assessment*, for evaluation of student brochures. Distribute Teaching Aids 72a and 72b to students prior to their beginning this project.

FHA/HERO ACTIVITY

- Chapter Activity - Prepare visual displays on interpreting food labels at local supermarkets or brochures to be distributed to consumers.
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

VIDEOTAPES

Food Safety and Sanitation, Introduction to Food-borne Illness, and Understanding Nutritional Labeling are available from the Home Economics Curriculum Center

WEB SITE

Food and Drug Administration
www.fda.gov

101

7D- The student is expected to relate the effects of work space, tools, equipment, and technology on food preparation.

1) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Have students draw a floor plan of a kitchen. Have them draw a line from the sink to the refrigerator, from the refrigerator to the oven and/or cooktop, and from the oven and/or cooktop back to the sink.

Define **work triangle**. Name the three major work centers and the major pieces of equipment from each center which make up the work triangle. Display Teaching Aid 73, **Kitchen Planning**, on the overhead projector and lead a class discussion on the basic kitchen shapes, the work triangles illustrated in each, and the arrangement of equipment.

KEY QUESTIONS

- What shape did your lines create?
- Which kitchen shape is usually considered the most efficient arrangement? Why?
- How are time, energy, and management affected by kitchen planning, design, and arrangement of equipment and tools?
- What is meant by the different "work centers" found in a kitchen?
- What are some suggestions for efficient arrangement of kitchen tools and equipment (such as small appliances) that consumers can implement to facilitate management of food preparation tasks?

2) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Have students identify large and small kitchen equipment and food preparation tools used in food preparation. Lead a class discussion on the specific purposes of each piece of equipment and their effect on food preparation.

KEY QUESTIONS

- What are the effects on food preparation of various kitchen equipment and tools?
- What special features allow for the equipment to have multiple uses?
- How do added equipment features affect the equipment costs?
- What technological advancements have impacted kitchen equipment?
- How has food preparation been impacted by technology?
- How are kitchen design and food preparation tasks likely to be impacted by technology in the future?

NOTES

TA 73 Kitchen Planning

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NOTES

3) BRAINSTORMING/CLASS DISCUSSION/LABORATORY EXPERIENCE



Have students brainstorm to create a list of basic food preparation tools and equipment that would be needed to set up a new kitchen.

KEY QUESTIONS

- Are these tools and equipment important for managing food preparation tasks? Why?
- What is the relationship between work space, tools, equipment, and technology on efficient management of food preparation?

Divide students into laboratory groups. Instruct students to survey the arrangement of the tools and equipment in their assigned laboratory kitchen. Based on what they have learned in the previous activities, have students plan a more efficient arrangement, if needed. After the teacher has approved each laboratory group's plan, have students implement the plan, including any surface or equipment cleaning necessary.

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

RESOURCES

WEB SITES

The Kitchen Network
www.kitchen.com

National Kitchen and Bath Association
www.nkba.org/consumer.html

7E- The student is expected to determine ways family members assuming multiple roles can apply food management skills.

1) CLASS DISCUSSION/LABORATORY EXPERIENCE

Have students brainstorm ways family members assuming multiple roles can apply food management skills. Display Teaching Aid 74, *Meal Management Strategies For Busy Families*, on the overhead projector. Lead a class discussion on these strategies and the benefits for individuals managing family, community, and career roles.

KEY QUESTIONS

- How can family members benefit from implementing these strategies?
- What additional strategies can you suggest that would assist in meal management?

Early morning routines and time schedules are often hurried for many individuals. Many times, the morning meal is skipped or lacks adequate nutrition. Lead a class discussion about the role of breads and cereals as a part of a nutritious breakfast.

KEY QUESTION

- What are the components of a nutritious breakfast?

Explain to students that muffins and other quick breads are nutritious and easy to prepare. They can be prepared ahead of time, cooled, and stored in an airtight plastic bag at room temperature for two to three days or in the refrigerator for up to four days. Muffins freeze well if allowed to cool completely prior to freezing. Paper or foil liners or spraying the muffin tins with a nonstick cooking spray will facilitate cleanup. Muffin recipes can be easily doubled or halved for small families.

Divide students into laboratory groups. Use Teaching Aids 75a - 75d, *Managing Breakfast*, and have students prepare the muffin recipe making notes of the time and utensils involved in preparation and cleanup. Have students save some of the baked muffins to reheat on another day. Have students halve the recipe if time and resources are limited. Following the laboratory experience, have students respond to the questions on Part B of Teaching Aid 75b.

KEY QUESTIONS

- How much time was involved in preparation of the muffins, including baking, cooling, and cleanup?
- How much time would be needed on a busy morning to prepare the muffins using the refrigerated batter?

NOTES

TA 74 *Meal Management Strategies For Busy Families*

TA 75a - 75d
Managing Breakfast

**TAAS
MATH**

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NOTES

TA 76 *Survey of Where People Eat*

TAAS
MATH



KEY QUESTIONS, CONTINUED

- How much time would be needed to reheat muffins that had been baked previously?
- In addition to the muffins, what additional food items should be included for a nutritious breakfast?
- How can "fix ahead foods" assist family members assuming multiple roles apply food management skills?
- What are some other ways families can use food management skills to save time and energy when managing multiple family, community, and career roles?

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

2) RESEARCH/INDIVIDUAL ACTIVITY

Distribute a copy of Teaching Aid 76, *Survey of Where People Eat*, to students. Instruct students to complete the top grid of eight squares by surveying the represented individuals regarding the number of meals they eat out and at home during the week. Using the results from the survey, and as a group, calculate the average number of meals in each category by following the instructions on the handout. Ask students to create a bar graph depicting the results. Lead a class discussion on the findings.

KEY QUESTIONS

- Which group eats out the most? Why do you think this is so?
- Which group eats out the least? Why do you think this is so?
- Which group do you think spends the most money on food? Why?
- How can eating out be one strategy for meal management for individuals managing multiple family, community, and career roles?

Ask the students to create a list of restaurants whose advertisements are aimed at each of the populations surveyed.

FHA/HERO ACTIVITIES

- Families First: Balance Family and Career
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

7F- The student is expected to analyze food costs and budgeting needs.

1) INDIVIDUAL ACTIVITY/PROBLEM SOLVING

Distribute Teaching Aids 77a and 77b, *Consumer Math*, to students. Have students complete the activity showing all work. Review answers with students as well as the formulas and computations for solving each problem.

2) CLASS DISCUSSION/PROBLEM SOLVING

Lead a class discussion about the varying amounts of money families spend for food. Explain that families usually spend between 15 and 30 percent of the family income on food. Discuss with students why this percentage varies from family to family.

KEY QUESTIONS

- Why might a family with a higher income spend a lower percentage of their total income on food than a family with a lower income?
- How might the need to spend more on food affect other areas of the budget of a family with less money?

Write the monthly income of a fictitious family on the board or overhead projector. Have students specify a percentage of this family's monthly budget that will be spent on food. Instruct each student to calculate the dollar amount the family budgets for food by converting the percent to a decimal (divide the percent by 100) and multiplying the total family income by the resulting decimal. For example, if a family makes \$1,200 per month and spends 30 percent of this amount on food, to find out the dollar amount spent on food do the following:

1. Divide 30 by 100 to get .30.
2. Multiply \$1,200 by .30 to get \$360.
3. The amount of money the family budgets for food in one month is \$360.

Have students work in groups to check their answers after you have assigned the problem. Make sure students show their work. Continue to give problems until all students understand the method. Stress why knowing the dollar amount budgeted on food can be helpful in food selection and food purchasing.

3) CLASS DISCUSSION/GROUP ACTIVITY



Have students brainstorm factors that affect a family's food budget. Display Teaching Aid 78, *Meal Planning on a Budget*, on the overhead projector. Lead a class discussion on how these factors could affect a

NOTES

TA 77a - 77c

Consumer Math

TAAS
MATH

TAAS
MATH

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TA 78 *Meal Planning on a Budget*

NOTES

family's food budget. Discuss with students which foods might be included in planning menus for families with limited food budgets, moderate food budgets, and high food budgets.

Divide students into groups according to the food groups in the Food Guide Pyramid. Have each group categorize foods for their food group according to local food costs (e.g., canned, frozen, fresh vegetables, stew meat or roast, etc.).

KEY QUESTIONS

- How can good nutrition be achieved on a low food budget?
- How can poor nutrition occur with a high food budget?
- What factors could influence both budgets?
- Why might the food budget level not exactly reflect the income level?

TAAS
MATH



4) GROUP ACTIVITY/SCENARIO



Divide the class into groups. Have each group develop daily menus for varying food budgets. Have students determine the nutritional adequacy of the menus by using a dietary analysis computer program or other references. Instruct students to evaluate the aesthetic quality of the menus. Have students assume that the menus developed will be used by a family of five (two parents with three children, ages 8, 13, and 17. Have students compute the cost per person for one day's menus for each food budget.

FHA/HERO ACTIVITIES

- Financial Fitness: Consumer Clout
- Skills for Life
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

7G- The student is expected to design a variety of daily menus.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Have students read resource information on meal planning in textbooks or other resources. Lead a class discussion on meal planning using the *Food Guide Pyramid* as a resource. Discuss with students the five factors that add variety to meals and that should be considered in meal planning: color; size and shape; texture; temperature, and, flavor. Have a student volunteer go to the board and write sample menus as the other students give suggestions of sample menus. Display Teaching Aid 79, *Adding Variety to Meals*. Have the students evaluate the sample menus using the *Food Guide Pyramid* and the five factors as criteria for evaluation.

TA 23 *Food Guide Pyramid*

TA 79 *Adding Variety to Meals*

TAAS
READING

2) CLASS DISCUSSION/WRITTEN EXERCISE

Lead a class discussion regarding reports that many Americans are consuming diets high in fat and cholesterol. Display a transparency of Teaching Aid 80, *Ways to Lower Fat and Cholesterol in the Diet*. Discuss with students ways to avoid too much fat in the diet.

TA 80 *Ways to Lower Fat and Cholesterol in the Diet*

KEY QUESTIONS

- What factors may have contributed to this increase in fat consumption?
- How can fat consumption be lowered in diets?
- What health problems are attributed to high fat consumption?

TA 81 *Create Low-Fat Menus*

Have students use Teaching Aid 81, *Create Low-Fat Menus*, and adjust the menus to make them lower in total fat content and lower in cholesterol. Have students compare menu changes made and discuss foods which are high in fat and cholesterol.

3) INDIVIDUAL ACTIVITY/CLASS DISCUSSION/WRITTEN EXERCISE

Have students read articles on sugar consumption.

TAAS
READING

KEY QUESTIONS

- How many pounds of sugar does the average American eat in one year? How much per day?
- What health problems other than tooth decay may result from consuming too much sugar? How is sugar hidden in foods?

NOTES

- TA 82 *Ways to Reduce Sugar Consumption in the Diet*
- TA 83 *Create Low-Sugar Menus*
- TA 84 *Create Low-Sodium Menus*

RESOURCES

BOOK

Duyff, Roberta Larson,
1998. *The American Dietetic Association's Complete Food and Nutrition Guide*.

WEB SITES

American Dietetic Assn.
www.eatright.org
American Heart Assn.
www.americanheart.org
American Cancer Society
www.cancer.org
Cooperative Extension
Service, Kansas State
University
[www.oznet.ksu.edu/
ext-f&n](http://www.oznet.ksu.edu/ext-f&n)



KEY QUESTIONS, CONTINUED

- What are some foods high in sugar content?
- How might excessive sugar consumption be reduced or avoided?

Display a transparency of Teaching Aid 82, *Ways to Reduce Sugar Consumption in the Diet*. Have students use Teaching Aid 83, *Create Low-Sugar Menus*, and adjust the menus to make them lower in sugar content. Have students compare their menu changes.

Have students read references regarding the quantity of salt consumed by the average American, the amount actually needed, and health problems associated with high sodium consumption.

KEY QUESTIONS

- What health problems are associated with a high level of salt consumption?
- How much salt does the average American need in the daily diet?
- How might one avoid excessive salt consumption?

Have students use Teaching Aid 84, *Create Low-Sodium Menus*, and adjust the menus provided to make them lower in sodium content. Have students compare their menu changes.

4) LABORATORY EXPERIENCE

Divide students into laboratory groups. Have each group select one of their menus from Strategy 2 or 3 above to prepare. Have the students share with the class the adjustments made to the menus and how these adjustments met the criteria for meal planning, including nutritional value, variety, and low-fat, low-sugar, or low-sodium.

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

FHA/HERO ACTIVITIES

- Power of One: Family Ties - Have students begin a collection of favorite family recipes.
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

7H- The student is expected to determine how technological advancements have impacted the nutritional value of foods.

1) CLASS DISCUSSION/INTERNET SEARCH



Lead a class discussion on the impact of technology on the types, selections, quantity, quality, nutritional values, and costs of food products available to consumers.

KEY QUESTIONS

- What are some food products that are available as a result of technology?
- How has technology impacted the nutritional value of foods?
- What are some examples in which technology might decrease the cost of certain foods and in other cases increase the cost of foods?
- How has technology added conveniences for the consumer to the foods that are available?
- How do the built-in conveniences for consumers impact food prices?

Have students do an Internet search for information on technological advancements in the food industry. Have students share their findings with the class.

2) VISUAL DISPLAY/INDIVIDUAL ACTIVITY



Create a display at the front of the classroom using various types of green beans (e.g., fresh, canned, frozen) and varieties (e.g., Blue Lake, Kentucky Wonder, Italian) available at the grocery store. Point out the different kinds of green beans, uses, and origins of each. If possible, allow students to sample the different kinds.

Distribute Teaching Aid 85, *Green Beans Improve with Advanced Breeding* and Teaching Aids 86a and 86b, *Reading Assessment*. Tell students that they are going to learn about technological advancements in breeding varieties of the green bean by reading the article. Go over the *Reading Assessment* worksheet with students, beginning with question #1. Students should read the article carefully and highlight or underline the important information as they would with the typical TAAS reading test. Instead of students answering questions about the article as they would in the typical TAAS reading test, they are writing questions and answers regarding information in the article.

NOTES



TA 85 *Green Beans Improve with Advanced Breeding*

TA 86a & 86b
Reading Assessment

TAAS
READING

SCIENCE

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NOTES



FHA/HERO ACTIVITIES

- STAR Event: Illustrated Talk on new technological advancements that have improved the nutritional value of the food supply.
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

Nutrition and Food Science

Knowledge and Skills.

(8) Food management skills.

The student demonstrates safety and sanitation procedures.

The student is expected to:

- (A) identify potential safety and sanitation hazards;
- (B) demonstrate safe and sanitary practices in the use, care, and storage of tools and equipment;
- (C) describe food storage principles; and
- (D) demonstrate safety and sanitation practices when handling, storing, preparing, and serving food.

8A- The student is expected to identify potential safety and sanitation hazards.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) CLASS DISCUSSION/GROUP ACTIVITY



Display Teaching Aid 87, *Kitchen Safety Tips*, on the overhead projector and go over each of the points with students. Lead a class discussion on the importance of safety in the home kitchen and the food laboratory.

TA 87 Kitchen Safety Tips

KEY QUESTIONS

- What are the consequences if individuals do not practice kitchen safety?
- Why will a kitchen or food laboratory never be without some safety hazards?

Have students use resources to develop a kitchen and food laboratory safety checklist. Divide students into laboratory groups. Have students investigate a work area in the food laboratory for safety hazards and make a list of these hazards. Assign students a food laboratory work area other than their own to investigate. Have each group share with the class their "investigative report" and make suggestions for correcting these hazards.

2) CLASS DISCUSSION/GROUP ACTIVITY/VISUAL DISPLAY



As an introduction to potential food safety and sanitation hazards, discuss with students the dangers of food-borne illnesses including those caused by staphylococcus, salmonella, clostridium botulism, clostridium perfringens, and others. Include information on types, causes, transmission, and prevention of food-borne illnesses.

SCIENCE

Using 3x5 note cards, write a common term related to safety and sanitation on each card. Terms could include:

- | | |
|---------------------------|-----------------------|
| • food-borne illness | • e-coli |
| • staphylococcus | • sanitize |
| • salmonella | • bacteria |
| • clostridium botulism | • virus |
| • clostridium perfringens | • clean |
| • hepatitis | • cross-contamination |

Depending on the size of the class, have each student draw one card or divide the class into groups based on the number of terms, and have each group draw one card. Instruct students to use resources to define and explain their assigned term. Have individual students or groups create a poster by writing their term and its definition on a

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NOTES

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READING



TA 88 *Laboratory Experiment: Food Safety and Sanitation*

SCIENCE



piece of construction paper, then have students find pictures from magazines or other resources that would assist them in remembering the term and its definition or explanation. Have students present their terms to the class. Use the student presentations as a springboard for class discussion on the importance of being able to identify potential safety and sanitation hazards. Display posters in the classroom.

3) **RESEARCH/CLASS DISCUSSION/LABORATORY EXPERIENCE**

Have students research information about food-borne illness. Supplement research by reviewing the following information:

Microorganisms are too small to see, yet they are everywhere. When microorganisms are allowed to grow on food, they can cause food-borne illness. The result of such illness can be vomiting, diarrhea, and in extreme cases death. The incidence of food-borne illness can be reduced by making sure that everything used to prepare food is clean. Ask students to describe things that come in contact with food that is being prepared. Lead students to discuss ways to prevent food-borne illness.

KEY QUESTIONS

- Why is it important to cover food properly?
- Why should food be stored at the correct temperature?
- Why is it important to discard food that has been stored for too long?
- Why should cans that are swollen or dented not be used?

Collaborate with a science teacher at your school to design an experiment that demonstrates the importance of safe food handling. Use Teaching Aid 88, *Laboratory Experiment: Food Safety and Sanitation*, as a guide for the experiment.

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

4) **GROUP ACTIVITY/ FHA/HERO**



As an FHA/HERO chapter activity, have students prepare first aid kits for home kitchens and distribute them to families in the community. Students should research information to determine what should be included in the first aid kit. The first aid kit should include a "Kitchen Safety Checklist" that students have prepared (similar to Teaching Aid 87).

RESOURCES

Introduction to Food-borne Illness videotape, available from the Home Economics Curriculum Center
Education Service Centers (for information on conducting classroom science experiments)

8B- The student is expected to demonstrate safe and sanitary practices in the use, care, and storage of tools and equipment.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) DEMONSTRATION/VIDEOTAPE/CLASS DISCUSSION

Conduct demonstrations or have students view a videotape that covers kitchen safety practices and the use and care of:

- knives
- can openers
- gas and electric ranges
- garbage disposals
- pots and pans
- other basic kitchen tools and equipment

KEY QUESTIONS

- How should the pieces of equipment be used and cleaned?
- What types of accidents may occur if proper use, care, and storage are not observed?

2) GROUP ACTIVITY/DEMONSTRATION



Write the names of tools and equipment that students will use or have access to during the semester on 3x5 index cards. Be sure to include all of the basic tools and equipment students will use. Divide the class into pairs and appoint each pair to serve as safety specialists for specific tools or a piece of equipment used in the food laboratory. Have students read resources or the owner's manuals (if applicable) and work with the tool or equipment item to become skilled in: proper use and care; appropriate placement in the laboratory when in use; and, recommendations for storage of their assigned item(s). Instruct student pairs to demonstrate for the class the appropriate use and care of their assigned tools or piece of equipment. Evaluate students' "teaching" on the basis of content and effective communication skills.

If owner's manuals cannot be found, do an Internet search for the tool or equipment manufacturer's Web site and see if the manual can be downloaded or a replacement ordered.

KEY QUESTIONS

- What safety precautions should be taken in the use and care of your assigned tool(s) or piece of equipment?
- What accidents can result from unsafe use of tools and equipment?

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NOTES

3) VIDEOTAPE/VISUAL DISPLAY



Have students view videotapes or other references on safe work practices in the kitchen and food laboratory. Discuss with students the advantages and disadvantages of practicing safe work practices at home, school, and the workplace.

KEY QUESTIONS

- What are consequences of unsafe kitchen practices at home? in the school laboratory?
- What adjustments could be made to promote safety in a kitchen or when using equipment?
- How are necessary safety practices affected by the makeup of the family and its food preparation patterns?
- What safety practices might be indicated if there are small children with access to the kitchen?

As a follow-up activity, have students work in groups to create "Safety Posters" that identify potential safety and sanitation hazards and key steps to prevention of accidents and illness.



FHA/HERO ACTIVITIES

- Skills for Life
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

BOOK

American Association of Family and Consumer Sciences, 1993. *Handbook of Food Preparation* (9th ed.).

VIDEOTAPE

Food Safety and Sanitation, available from the Home Economics Curriculum Center.

8C- The student is expected to describe food storage principles.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

1) INDIVIDUAL ACTIVITY/CLASS DISCUSSION

Have students read resources from the classroom, school library, or Internet on proper food storage temperatures and on selecting appropriate thermometers for monitoring cold food storage. Distribute copies of Teaching Aid 89, *Temperature of Food for Control of Bacteria Worksheet* for students to record information learned in the readings. Display Teaching Aid 90, *Temperature of Food for Control of Bacteria*, and review with students the proper temperatures for safe food storage and the "Danger Zone." Allow students to use information from the transparency to complete their worksheets, if necessary. Have students color the "Danger Zone" red on their thermometers.

KEY QUESTIONS

- How long can prepared food be safely left at room temperature?
- What is the temperature danger zone for bacterial growth?

2) CLASS DISCUSSION/INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Define these terms for students:

- *short-term storage* - one to two days
- *medium-term storage* - one week to three weeks
- *long-term storage* - one month or longer

Distribute a copy of Teaching Aid 91, *Food Storage*, to students. Have students use textbooks and other available resources to identify and list ten foods for each column, leaving space under each. Examples might include fresh fish or ripe bananas as short-term storage foods, eggs or cheddar cheese as medium-storage, and canned green beans or pickled cucumbers as examples of foods for long-term storage.

Have the students use resources in the classroom to research appropriate storage methods for each food and write a description of the food storage principle under each food, such as wrap tightly and refrigerate. Use students answers to assist in a discussion on the reasons why appropriate storage methods render a food less vulnerable to damage from spoilage and natural ripening processes. Include in the class discussion information related to the following points:

- freezer storage, including packaging, length of storage, labeling, and foods recommended for freezer storage

NOTES

TA 89 *Temperature of Food for Control of Bacteria Worksheet*

TA 90 *Temperature of Food for Control of Bacteria*

TAAS
READING

SCIENCE



TA 91 *Food Storage*

TAAS
READING

NOTES

- rotation of stored food items, shelf life, and expiration dates
- information on what foods can be stored where and how, such as refrigerating bananas, freezing eggs, milk, and cheese, storing fresh meat in the meat drawer, etc.

KEY QUESTIONS

- Why is it important to practice proper food storage?
- What are the consequences of improperly stored food items?
- How is knowledge of proper food storage related to consumer food buying?

RESOURCES

BOOKS

American Association of Family and Consumer Sciences, 1993. *Handbook of Food Preparation* (9th ed.).

National FFA Foundation, *Food Science, Safety, and Nutrition: Curriculum Guide*.

VIDEOTAPE

Food Safety and Sanitation, available from the Home Economics Curriculum Center.

WEB SITES

USDA Food and Nutrition Information Center
www.nal.usda.gov/fnic

Extension Food and Human Nutrition
agweb.tamu.edu/ansc/nutr/nutr.htm

8D- The student is expected to demonstrate safety and sanitation practices when handling, storing, preparing, and serving food.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) GUEST SPEAKER/WRITTEN EXERCISE



Invite a health department representative to speak to the class regarding governmental regulations for food safety in the food industry. Topics the speaker might address include: government standards and inspections; regulations set to reduce incidence of food-borne illness; and, major causes of food-borne illness and food contamination in food handling, preparation, and service. As a follow-up activity, have students write a summary statement or paragraph about each topic covered in the presentation. For this activity, students will need a list of the topics and/or questions to be addressed by the guest speaker in advance of the presentation so that they may make notes to use in their summaries.

TAAS
WRITING

2) CLASS DISCUSSION

To prepare students for working in the food laboratory, display the following teaching aids on the overhead projector or distribute copies to students.

- | | |
|-----------------|---|
| Teaching Aid 92 | <i>Rules for Personal Hygiene and Sanitation in the Food Laboratory</i> |
| Teaching Aid 93 | <i>Rules for Cleanliness in Food Preparation Areas</i> |
| Teaching Aid 94 | <i>Prevention of Accidents and Injuries</i> |

Discuss with students the following reasons for rules and safe practices in food preparation areas:

- Unsanitary habits cause contamination of food and lead to illness.
- Unsanitary food preparation practices and food preparation areas, tools, and equipment are unhealthy and not conducive to the Nutrition and Food Science learning environment.

Lead a class discussion thoroughly covering each point listed regarding safety and sanitation when handling, storing, preparing, or serving food.

TA 92 *Rules for Personal Hygiene and Sanitation in the Food Laboratory*

TA 93 *Rules for Cleanliness in Food Preparation Areas*

TA 94 *Prevention of Accidents and Injuries*

KEY QUESTIONS

- What are some important guidelines to follow when handling food?
- What are some important guidelines to follow when storing food?

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NOTES

KEY QUESTIONS, CONTINUED

- What are some important guidelines to follow when preparing food?
- What are some important guidelines to follow when serving food?
- What consequences may occur if safety and sanitation practices are not followed in handling, storing, preparing, or serving food?

It may be appropriate to have students sign a teacher/student agreement that they have read and agreed to follow all safety and sanitation rules and practices when conducting laboratory experiences.

3) INDIVIDUAL ACTIVITY/OBSERVATION

During a series of food preparation labs, assign a student in each laboratory group to observe and report observations of personal hygiene practices, sanitation, safety, tool and equipment handling, as well as food handling practices of their group members. Assign the role of "Safety and Sanitation Observer" to a different student for each laboratory experience until all students have served in this capacity. The observing student should suggest ways to correct problems. Duties of the group members should be rotated so that each student will have an opportunity to participate in all laboratory roles. The Observer's report should be included with the laboratory evaluation form.



FHA/HERO ACTIVITY

- FHA/HERO activity ideas for the TEKS are included in the **Blended Activities** section.

RESOURCES

BOOK

American Association of Family and Consumer Sciences, 1993.
Handbook of Food Preparation (9th ed.).

VIDEOTAPES

Food Safety and Sanitation and *Introduction to Food-borne Illness*, available from the Home Economics Curriculum Center.

Nutrition and Food Science

Knowledge and Skills.

(9) Food management skills.

The student prepares and serves nutritious foods.

The student is expected to:

- (A) demonstrate skills and procedures in applying principles of food preparation.
- (B) prepare nutritious foods appropriate for individuals, families, and small groups;
- (C) practice etiquette, food presentation, and table service appropriate for specific situations; and
- (D) participate as an effective team member by demonstrating cooperation and responsibility.

9A- The student is expected to demonstrate skills and procedures in applying principles of food preparation.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) GROUP ACTIVITY/DEMONSTRATION



Distribute copies of Teaching Aid 95, *Food Preparation Terms*, to students. Divide the students into groups and assign each group a portion of the terms to research the definitions. Have each group present their definitions to the class. Have students combine their definitions and develop a "Food Preparation Terms Fact Sheet" to be used throughout the food preparation laboratory experiences. Assign a team of students to use computer software to produce the fact sheet of terms for distribution to class members.

TA 95 *Food Preparation Terms*



2) DEMONSTRATION/WRITTEN EXERCISE

An important skill needed for successful food preparation is knowledge of measurements, measuring equipment, and equivalents. Have students examine dry and liquid measuring cups and measuring spoons. Show the various sizes and types of measuring equipment and ask students to identify each by name and by size. Explain that measuring accurately can make the difference between a successful food item and an unsuccessful food item. Demonstrate appropriate techniques for measuring dry ingredients, such as flour, and liquid ingredients. Distribute Teaching Aid 96a, *Standards of Measurement*, to students. Note that many recipes use the abbreviations listed at the top of the page and the importance of remembering them. Have students complete the exercise, using available resources such as equivalent charts in textbooks. Review the answers with the class and have students keep the worksheets in their folders as a reference.

TA 96a & 96b
Standards of Measurement and Answer Key

**TAAS
MATH**

3) WRITTEN EXERCISE/CLASS DISCUSSION

Have students bring a favorite recipe to class. Review with students formats for presenting recipes. Have students compare the formats of the recipe they brought to those from different cookbooks or samples. Choose the format that students will be using throughout the laboratory experiences for this course and have students rewrite their favorite recipe using that style. Lead a class discussion on the process.

Emphasize that being able to read and interpret a recipe is an important skill of food preparation. As a follow-up activity, have students complete Teaching Aid 97a and 97b, *Can You Read a Recipe?*

TA 97a & 97b
Can You Read a Recipe?

NOTES

TA 98a & 98b

Tips for Teachers: Laboratory Experiences in Nutrition and Food Science

TA 99 Laboratory Duties

TA 100 Laboratory Plan of Work

TA 101 Laboratory Assessment

TA 102 Commonly Used Substitutions

RESOURCES

BOOK

American Association of Family and Consumer Sciences, 1993.
Handbook of Food Preparation (9th ed.).

WEB SITE

Aunt Edna's Kitchen
www.cei.net/~terry/auntedna/



4) LABORATORY EXPERIENCE/TEAMWORK

After students have studied the skills and procedures needed to apply principles of food preparation, have students conduct a laboratory experience preparing the recipe for Blonde Brownies. Note that students should write the food product standards on Teaching Aid 101, *Laboratory Assessment*, prior to the laboratory experience.

Read Teaching Aids 98a and 98b, *Tips for Teachers: Laboratory Experiences in Nutrition and Food Science*. Distribute copies of the following Teaching Aids to students. Review the procedures for completing each of the forms for each laboratory experience.

- Teaching Aid 99 *Laboratory Duties*
- Teaching Aid 100 *Laboratory Plan of Work*
- Teaching Aid 101 *Laboratory Assessment*

Following the laboratory experience, lead a class discussion on students' application of food preparation principles and food management skills.

KEY QUESTIONS

- Why is it important to use standard measuring equipment in preparing a recipe?
- Why is it important to be knowledgeable of the skills and procedures for food preparation as well as be able to apply the principles of food preparation?
- How are food management skills related to the success of food preparation?

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

5) CLASS DISCUSSION/WRITTEN EXERCISE

Distribute copies of Teaching Aid 102, *Commonly Used Substitutions*. Discuss with students the importance of being able to adapt recipes to supplies on hand, individual needs, and preferences. The ability to use substitutions is an important skill and sometimes a necessary procedure of food preparation.

FHA/HERO ACTIVITIES

- Skills for Life
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

9B- The student is expected to prepare nutritious foods appropriate for individuals, families, and small groups.

This TEKS also is addressed as part of a Blended Activity. See the section, **Blended Activities**.

NOTES

1) LABORATORY EXPERIENCE/CLASS DISCUSSION

Have students prepare the recipe on Teaching Aid 103, *Chicken and Dumplings* or Teaching Aid 104, *Chicken a la King*. Go over the recipe prior to the lab, trying to address problems the students may have. Discuss also possible substitutions for the list of ingredients (e.g., substitutions that would make the dish more nutritious or make the dish more economical). Some possible substitutions might be to use reduced fat or reduced sodium soups, preparing their own chicken broth, or using flour tortillas instead of biscuits.

TA 103 Chicken and Dumplings

TA 104 Chicken a la King

KEY QUESTIONS

- How could the recipes be modified to provide lower fat? lower sodium?
- How could the recipes be adapted to serve families or small groups?
- How could the recipes be adapted to make the dishes more economical?
- How could the recipes be modified to accommodate family schedules with limited time for food preparation?
- What foods could be served with either of the two recipes to make a more nutritious meal?

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

2) LABORATORY EXPERIENCE/CLASS DISCUSSION

To provide students with opportunities to prepare nutritious foods appropriate for individuals, families, and small groups, assign individual laboratory groups the following meal planning challenges:

- a low-fat meal for a family of three adults
- a meal for a family of four with thirty minutes preparation time
- a regular meal for a family of five with young children, ages 2, 4, and 6

Discuss with students food presentation ideas, importance of time management, as well as serving and storage principles of the foods prepared.

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Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

FHA/HERO ACTIVITIES

- Chapter Activity - With small children, prepare nutritional snacks and help them understand why they are healthy snacks.
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

9C- The student is expected to practice etiquette, food presentation, and table service appropriate for specific situations.

The concepts addressed in TEKS 9C regarding table etiquette, food presentation, and table service should be reinforced in each laboratory experience throughout the Nutrition and Food Science course.

NOTES

1) VIDEOTAPE/CLASS DISCUSSION/WRITTEN EXERCISE

Have students view a videotape on table etiquette such as *Fundamental Table Etiquette*, available from the Home Economics Curriculum Center. Lead a class discussion on the accepted customs of table etiquette and social behavior practiced in our society.

TA 105a & 105b
Table Etiquette

TA 105c
*Table Etiquette
Answer Key*

KEY QUESTIONS

- Why is it important to learn and practice accepted customs of table etiquette?
- How are individuals seated at a table together affected by the table manners of each person?
- Why are these accepted customs of table etiquette and social behavior important in business situations?
- Why is it important to practice these customs in the home as well as outside the home?

Have students complete Teaching Aids 105a and 105b, *Table Etiquette*. Discuss the correct responses with the class.

2) VIDEOTAPE/CLASS DISCUSSION/WRITTEN EXERCISE

Today nearly one-third of all meals consumed are eaten away from home. Learning appropriate restaurant etiquette is an important concept for students. Have students view a videotape on restaurant etiquette such as *Fundamental Restaurant Etiquette*, available from the Home Economics Curriculum Center. Lead a class discussion on accepted practices for restaurant etiquette including tipping.

TA 106 *Restaurant
Etiquette:
Tipping*

KEY QUESTIONS

- Why is knowledge and skill in appropriate restaurant etiquette important in our society?
- Why are table and restaurant etiquette skills important in the business world?
- What is the practice for being seated at a restaurant by a hostess or maitre d'?
- Why is tipping important?
- What is the practice for tipping at a buffet or for home delivery of food?

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Distribute Teaching Aid 106, *Restaurant Etiquette: Tipping*, to students. Have students complete the exercise by figuring the tip and total bill for each of the guest checks. Have students share their answers with the class.

3) INTERNET ACTIVITY/WRITTEN EXERCISE



Have students visit the Web site www.food.epicurious.com. Students should then proceed to the "Playing With Your Food" section. Allow students to explore this section. After exploration, have students write a summary of this Web site including one thing they learned about etiquette, one thing they learned about food presentation, and one thing they learned about table service from this activity.

4) LABORATORY EXPERIENCE/ FHA/HERO

As a FHA/HERO chapter activity, have students plan an appreciation luncheon or reception for kindergarten classroom teachers and directors and staff members of nursing homes and child care centers who have assisted the home economics classes by providing for students on-site experiences at their facilities. Divide students into laboratory groups. Assign each group responsibilities for food preparation, food presentation, and table service for this function. Following this activity, have students evaluate the skills they acquired and practiced in each of the areas studied (etiquette, food presentation, and table service).

Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

FHA/HERO ACTIVITIES

- Power of One: A Better You; Working on Working
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

VIDEOTAPES

Fundamental Table Etiquette and *Fundamental Restaurant Etiquette*, available from the Home Economics Curriculum Center.

WEB SITE

In Polite Company
www.food.epicurious.com 100

9D- The student is expected to participate as an effective team member by demonstrating cooperation and responsibility.

The concepts related to participating as an effective team member addressed in TEKS 9D should be reinforced in each laboratory experience throughout the Nutrition and Food Science course.

NOTES

1) BRAINSTORMING/CLASS DISCUSSION



Have students brainstorm key principles to functioning as an effective team member in food management, such as:

- teamwork (everyone shares responsibilities and does his/her part)
- cooperation
- delegation of responsibilities
- consideration of others
- positive attitude

Lead a class discussion on the principles of functioning as part of a team and the many real-life applications that exist for these skills.

KEY QUESTIONS

- What are the benefits of being effective team members?
- What are the implications and/or consequences of irresponsible team members?
- How are these skills used in busy families?
- How are these skills important in the workplace?
- How are these skills important for roommates?
- Why are these skills important in this class?

2) LABORATORY EXPERIENCE/WRITTEN EXERCISE

Divide students into laboratory groups. Tell students that in this laboratory experience they will be assigned a food item to prepare but they will not know in advance of class what they are going to prepare. They will have a few minutes at the beginning of the class to assign work roles to each individual in their laboratory group. Then they must proceed with the food preparation and service of the item(s) assigned to their group by the teacher. Remind students that this is an opportunity for them to practice participating as an effective team member throughout all the tasks involved in the laboratory experience. This exercise does require the teacher to select the foods to be prepared and compile the market order. Following the laboratory experience, have students reflect on their own participation as an effective team member by writing a paragraph about the experience.

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Please refer to page 17 of this section for information on planning, conducting, and evaluating laboratory experiences.

FHA/HERO ACTIVITIES

- Families First: You-Me-Us
- Power of One: A Better You; Family Ties; Working on Working; Take the Lead
- Leaders At Work
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

BOOK

Scearce, Carol, 1992. *100 Ways to Build Teams*.

Nutrition and Food Science

Knowledge and Skills.

(10) Career Preparation.

The student determines opportunities and preparation requirements for careers in nutrition and the food industry.

The student is expected to:

- (A) determine employment and entrepreneurial opportunities and preparation requirements for careers in the nutrition and the food industry;
- (B) compare personal characteristics to those needed for careers in nutrition and the food industry; and
- (C) propose short-term and long-term career goals.

10A- The student is expected to determine employment and entrepreneurial opportunities and preparation requirements for careers in the nutrition and the food industry.

1) GROUP ACTIVITY



Guide students in compiling a list of employment and entrepreneurial opportunities related to nutrition and the food industry. Divide students into small groups. Assign each group one or more of the following resources. Instruct students to search resources and compile a list of careers and entrepreneurial businesses related to nutrition and the food industry.

- O'Net
- Telephone Directory/Yellow Pages
- American Association of Family and Consumer Sciences (AAFCS)
- Council on Hotel, Restaurant, and Institutional Education (CHRIE)
- Universities and community colleges career centers
- Current periodicals such as *Small Business Opportunities*, *Entrepreneur, Inc.*, and *Restaurants and Institutions*
- *America's 50 Fastest Growing Jobs*
- Internet
- Chamber of Commerce
- Computer software on careers (see the school counselor)

Have students compare lists, delete duplications, and create a combined list of employment and entrepreneurial opportunities related to nutrition and the food industry. Have students prepare a "Nutrition and Food Science Career File" for the classroom, place their lists of career information in the file, and continue to update and add information to the file throughout the semester.

2) INDIVIDUAL ACTIVITY/INTERNET SEARCH



Have each student choose one of the careers from Strategy 1 above and investigate it thoroughly, seeking information related to: location of job opportunities; education and/or licenses required; skills required; salary scale for entry level positions; opportunities for advancement; and, related occupations (e.g., a dietitian working in a hospital might also teach nutrition at a nursing school). School and community libraries, as well as the Internet, should provide students with resource information on careers. Have students share their "investigative reports" with the class.

KEY QUESTION

- In the past, job and career opportunities were very closely related to "location." Why is this no longer the case?

NOTES



NOTES



3) GUEST SPEAKER

Invite a professional from the nutrition and food industry to speak to the class on employment and entrepreneurial opportunities available in their field and the education and training needed for these careers.

KEY QUESTIONS

- What education and/or training is needed for these careers?
- What certificates or degrees are required?
- What is the long-range outlook for careers in this field?
- What is the typical career ladder for young people entering these careers?
- What personal qualities are needed for success in this field?

4) RESEARCH

Have students research the requirements for a degree in food science, dietetics, or restaurant, hotel, and institutional management by using copies of college catalogs available from the school counselor, public library, or individual college and university Web sites. Many universities post complete catalogs and degree requirements on their Web page. Each student or team of students could research a different college or university. Be sure to include both in-state and out-of-state institutions and community colleges as well as four-year institutions. Using information acquired from the college catalogs, have students present their findings to the class.

KEY QUESTIONS

- What types of degrees are available at each institution?
- What are the admission requirements?
- What courses or degrees are available through distance learning?

FHA/HERO ACTIVITIES

- Power of One: Working on Working
- STAR Event: Entrepreneurship
- Leaders at Work in Foodservice
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

WEB SITES

E-SPAN

www.espan.com

Monster Board

www.monster.com

National Assn. of Colleges and Employers

www.jobweb.org

Online Career Center

www.occ.com/occ/

10B- The student is expected to compare personal characteristics to those needed for careers in nutrition and the food industry.

1) GROUP ACTIVITY



Following a guest speaker, video, or class project related to careers in nutrition and the food industry, have students develop a list of qualities necessary for success in these careers. Have students use this list and develop a Yes/No checklist of qualities for class members to complete. If available, have students use a word processing program to develop the checklist. The qualities listed on the checklist should be expressed as statements such as, *I am patient with the elderly* or *I enjoy talking to people*, or ask questions such as, *Do you enjoy working outdoors?* or *Would you mind working late hours and weekends?*

Some examples of characteristics students may wish to include are:

- cheerful
- cooperative
- dependable
- honest
- confidential
- patient
- responsible
- sincere
- communicative
- courteous
- flexible
- loyal
- well-groomed
- respectful of others
- self-respecting
- trustworthy

After the checklist has been completed, have each student complete the checklist and discuss the wide variety of qualities needed for careers in the nutrition and food industry.

2) INTERVIEW/WRITTEN EXERCISE

Have students select a career related to food science and nutrition that interest them. If possible, have students interview people employed in the career to determine personal characteristics needed for job success. If interviews are not possible, have students research the career to gather information related to personal characteristics needed for careers in that field. Have students write a summary of their findings.

KEY QUESTIONS

- What are the personal characteristics needed for this career in the nutrition and food industry?
- What education and training is required for this job/career?
- What are the demands of the job/career?
- What opportunities for advancement are available?
- What are the advantages and disadvantages of employment in this area?

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NOTES

3) INTERVIEW/CLASS DISCUSSION

Have students interview an employer and ask what personal characteristics are sought in interviewing prospective employees. Ask students to report findings to the class. As a class, compile a list of the qualities and characteristics most often mentioned.

After students have identified characteristics employers seek in employees, lead a class discussion on responsibilities associated with jobs relating to nutrition and food science.

KEY QUESTIONS

- What characteristics are desirable for handling some of the responsibilities identified?
- What would be the likely implications of an employee lacking these targeted qualities and characteristics?
- Which qualities and characteristics do you have that would help promote success in a career related to nutrition and food science?



FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: SIGN ON to the Career Connection; PROGRAM Career Steps; ACCESS SKILLS for Career Success
- Power of One: A Better You; Working on Working; Take the Lead
- STAR Events: Interpersonal Communications; Job Interview

RESOURCES

10C- The student is expected to propose short-term and long-term career goals.

1) INDIVIDUAL ACTIVITY

Have students take out a sheet of paper and fold the paper in half lengthwise. On the left side of the paper, have students write "Short-term Career Goals", and on the right side of the paper, have students write "Long-term Career Goals". Explain to students that short-term goals are usually those that can be achieved in a few weeks to a few years and long-term goals are those that can take five or more years. Instruct students to list five short-term career goals they have for themselves in the left column, then have students write down five long-term career goals they have for themselves in the right column.

Encourage students to brainstorm and identify various occupational opportunities identified during the Nutrition and Food Science course. Have students read references to identify additional food science and nutrition-related occupations at the entry, skilled, technical, semiprofessional, and professional levels. Refer to Teaching Aid 107, **Career Concentration: Nutrition and Wellness/Food Science and Technology**, for examples of related occupations. For students interested in other fields, assist them with career options in their area of interest.

KEY QUESTIONS

- Based on the career options listed, what careers are available locally? in the county? state? nation? other parts of the world?
- How do opportunities in the nutrition and food science field correspond to your short-term and long-term career goals?
- What steps can you take now toward reaching these goals?
- How can taking steps toward reaching short-term and long-term career goals make positive contributions to personal, family, and community lives?
- What can you be doing currently through high school coursework, school and community activities, and work experiences to contribute to reaching short-term and long-term career goals?

2) INDIVIDUAL ACTIVITY/INTERNET SEARCH



Have students do an Internet search, send E-mail, write, or call to obtain college and university catalogs, technical school and culinary institute catalogs, and career information from professional associations and other groups, such as:

- American Dietetic Association
- American Culinary Association
- Cooperative Extension Service
- Council on Hotel, Restaurant, and Institutional Education
- National Restaurant Association

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**TA 107 Career
Concentration:
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Science and
Technology**



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Have students use these resources to obtain information about degree programs in nutrition and food science, entrance requirements, and courses of study to complete an educational program leading to a position in the food industry, food science and technology, or nutrition science. Students may wish to investigate the educational requirements of these careers. Have each student study a particular program and describe it to the rest of the class, indicating the college or school where it is offered, entrance requirements, length of the course of study, types of courses required in the program, opportunities for supervised work experience offered through the program, and anticipated cost of completing the program.

KEY QUESTION

- How do the opportunities available in the nutrition and food science field fit into your short-term and long-term career goals?



FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: SIGN ON to the Career Connection; ACCESS SKILLS for Career Success
- Power of One: Working on Working
- STAR Event: Entrepreneurship

RESOURCES

PUBLICATION

Future Homemakers of America, Inc., 1998. *FHA/HERO Career Connection*.

Nutrition and Food Science

Knowledge and Skills.

(11) Career preparation.

The student exhibits employability skills.

The student is expected to:

- (A) describe management practices facilitating individuals assuming multiple family, community, and wage-earner roles;
- (B) practice positive human-relations skills;
- (C) demonstrate effective verbal, nonverbal, written, and electronic communication skills;
- (D) demonstrate effective techniques to secure, maintain, and terminate employment;
- (E) identify ethical practices in the workplace; and
- (F) practice problem solving using leadership and teamwork skills.

11A- The student is expected to describe management practices facilitating individuals assuming multiple family, community, and wage-earner roles.

1) BRAINSTORMING



Lead students to brainstorm and list multiple roles an individual might have if he or she has a career in nutrition and food science, is a parent and/or spouse, and maintains a home. Use Teaching Aid 107, *Career Concentration: Nutrition and Wellness/Food Science and Technology*, to assist students in identifying careers in this field.

KEY QUESTIONS

- What kinds of management practices would be needed to fulfill these multiple roles ?
- How does a career affect an individual's personal life?
- What effect do occupational demands have on family life?

2) INTERVIEW/GROUP ACTIVITY



Assign each student to interview an adult, age 25-50, to find out what his or her work and family schedule of responsibilities in a typical week is like. Prior to the interviews, have the class determine appropriate interview questions to ask. If students know persons working in the field of nutrition and food science, it would be interesting to learn of their typical work and family schedules.

Following the interviews, divide the class into groups and have students share examples of typical work and family responsibilities and time demands of persons of different ages and family situations. Have students discuss management practices that help family members manage multiple roles. Have the groups report back to the class their suggestions for families managing multiple roles.

KEY QUESTIONS

- What demands do families managing multiple family, community, and career roles face?
- What types of jobs and careers appear to offer flexibility to family members managing multiple roles?
- What are some management practices that are helpful to individuals assuming multiple family, community, and career roles?
- What resources can be drawn upon by individuals managing multiple family, community, and career roles?

NOTES

TA 107 Career
Concentration:
Nutrition and
Wellness/Food
Science and
Technology

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NOTES

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RESOURCE

Felstehausen, G., 1999.
"Managing Multiple
Roles." *Essentials for
Home Economics
Education: The Corner-
stone*.



3) GUEST SPEAKER



Invite a manager, supervisor, or a small business owner to speak to the class about aspects of employee and employer expectations in regards to managing work and personal roles and responsibilities. If possible, select a resource person working in the field of nutrition and food science. Have the students prepare written questions to ask the resource person about managing personal roles and responsibilities while at the same time meeting job demands, including competing time schedules. Other questions might address qualities and characteristics desired in employees as well as employer expectations of employees. Share the questions with the resource person prior to their presentation. Have students write a summary of the presentation citing information learned regarding the management of multiple family, community, and career roles.

4) GROUP ACTIVITY/CLASS DISCUSSION



Contact local businesses and ask if they would be willing to share copies of job descriptions for various nutrition and food science positions such as found in hospitals, schools, restaurants, or food processing and marketing companies. Otherwise, use job descriptions found in career resource materials.

Have students work in small groups and analyze the job descriptions, copying from each description any specific statements about work roles and responsibilities, especially as they relate to the employee's work schedule and hours. For example, work roles might include supervision, evaluation, and reporting to management/owners. The job description may indicate that the employee will have hours different from the typical daytime, eight hour schedule.

On the overhead projector, write the headings "Demands" and "Rewards." Have the students differentiate between the items they selected from the job descriptions, indicating whether a particular work role or schedule requirement is a demand or if it is a reward that would make the job more enjoyable, flexible, or otherwise positive for the employee. Lead a class discussion on differences in students' perceptions about what constitutes a demand or reward for an employee in a job in the food and nutrition field.

FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: INTEGRATE Work and Life
- Power of One: Family Ties
- STAR Event: Skills for Life
- Families First: Families Today, You-Me-Us; Balancing Family and Career

11B- The student is expected to practice positive human-relations skills.

1) CLASS DISCUSSION/GROUP ACTIVITY/ROLE PLAY



Distribute copies of Teaching Aids 108a and 108b, *Mastering Positive Human Relations Skills*, for students to read individually. Discuss with students how attitude, dependability, self-control, initiative, honesty, and cooperation are traits that are an integral part of achieving positive human relations skills.

KEY QUESTIONS

- What other traits contribute to positive human relations with others?
- How do these factors contribute to success in managing family, community, and career roles?
- What opportunities do you have to practice improving human relations skills while in high school?

Divide the class into four or five groups and assign each group to write a case study that illustrates high school students demonstrating positive human-relations skills with others in a variety of situations. Have students role play their case studies for the class.

2) INTERVIEW/WRITTEN EXERCISE

Have students interview an adult who is in a position of seeing how good and poor human relations skills affect an individual's effectiveness in family, community, or career settings.

KEY QUESTIONS

- What were the characteristics of the individual's human relations skills?
- How were others affected?
- How did the skills affect the individual's personal effectiveness?

Have students write a summary of their findings with the title, "Human Relations Skills: What Difference Do They Make?"

KEY QUESTION

- How do human relations skills affect all aspects of one's life?

3) INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Have students select a human relations skill that they have identified as a weakness in themselves or someone they know. (Students are not to disclose who the individual is.) Have students prepare a development plan that answers the following:

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TA 108a & 108b
Mastering
Positive Human
Relations Skills

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- Describe the human relations skill that needs improvement.
- What are some examples of how the weakness in the human relations skill evidences itself?
- What action steps would be appropriate in improving this human relations skill?

Have students submit their development plans for review by the teacher.



FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: ACCESS SKILLS for Career Success
- Power of One: A Better You; Working on Working; Take the Lead
- STAR Events: Interpersonal Communications; Skills for Life
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

11C- The student is expected to demonstrate effective verbal, nonverbal, written, and electronic communication skills.

1) PROJECT

Have students work in groups to write, produce, and present a Power Point or other multimedia presentation about nutrition throughout the life cycle. Student groups can do an inclusive presentation of the life cycle, or each group can be assigned a particular stage of the life cycle to report about. Have students use resources from the classroom, school library, the Internet, and other sources to gather information for their presentations. Have each group present their projects to the class. Remind students of the verbal and nonverbal communication skills that are being utilized in the oral presentations.

2) CLASS DISCUSSION/INDIVIDUAL ACTIVITY/WRITTEN EXERCISE

Lead a class discussion on reasons why a person might like their job—any job. Pose this question to students, "What would make a job or career especially appealing to you?" Compile their ideas on the board or overhead projector. After students have listed fifteen to twenty items, have them indicate whether particular items are intrinsic rewards, extrinsic rewards, or not classified as a reward at all. Intrinsic rewards might consist of statements like the following: "Freedom to be creative." "Having enjoyable people to work with." Extrinsic rewards would be tangible benefits such as money, time off, or vacation days.

Following this differentiation, show the class a transparency of Teaching Aid 107, **Career Concentration: Nutrition and Wellness/Food Science and Technology**, which shows several nutrition and food science career options. Return to the list of intrinsic and extrinsic rewards and have the students select jobs from the career option chart which they think would offer many of the intrinsic rewards from their list. Next, have the students pick jobs which they think would offer many of the extrinsic rewards. Finally, have them indicate which jobs might provide high levels of both intrinsic and extrinsic rewards. Lead a class discussion on whether jobs higher on the career ladder seem to offer more of both types of rewards or if there are other patterns in the kinds of jobs the students selected as offering low or high levels of types of rewards. Have students point out the rewards from their list which they did not believe any of the jobs from the career ladder offered.

As a follow-up activity, have students create the "perfect" job for themselves and write a job description. Have students write a persuasive letter to the potential employer of this "perfect" job stating why the employer should hire him or her. Use Teaching Aids 109a and 109b, **Outline for a Persuasive Letter**, to assist students in their writing. Have students use computer word processing software to publish their letters.

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**TA 107 Career
Concentration:
Nutrition and
Wellness/Food
Science and
Technology**

**TA 109a & 109b
Outline for a
Persuasive Letter**

TAAS
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FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: ACCESS SKILLS for Career Success
- Power of One: A Better You; Working on Working; Speak Out for FHA/HERO
- STAR Event: Interpersonal Communications
- Additional FHA/HERO activity ideas for this TEKS are included in the **Blended Activities** section.

RESOURCES

11D- The student is expected to demonstrate effective techniques to secure, maintain, and terminate employment.

1) GUEST SPEAKER



Have the school career and technology counselor or career placement representative from a college or university speak to the class about education and training opportunities available to students to assist them in preparing for a career. Have students write questions they may have regarding securing employment in a chosen career field on 3x5 cards. Share the cards with the speaker in advance of the presentation.

2) RESEARCH/ORAL PRESENTATION/PROJECT



Divide the class into small groups. Assign each group one of the following areas to investigate:

- Resumé
- Letter of Application
- Application form
- Job interview
- Follow-up letter

There may be multiple groups for each type if needed. Have students use library resources, the Internet, resources from the business education teacher, career counselor, or others to research information on their topic and how it is used in the job application and interview process. Have each group prepare an oral presentation and "teach" the class on how to prepare and use their topic in the job application process. Have each group prepare a visual aid (e.g., poster, transparency, etc.) to use in teaching the class these skills.

After all groups have concluded their presentations, have each student prepare a resumé, letter of application, and follow-up letter for a career in the nutrition and food science industry. Have students use computer software programs to create these documents. Instruct students to work in pairs to critique each other's work, make revisions, and then file for future reference.

3) CLASS DISCUSSION

Lead a class discussion on work habits and attitudes that contribute to job success. Have students identify characteristics of employees that lead to job success.

KEY QUESTIONS

- How can positive work habits contribute to job success?
- How would you describe an employee who has a positive work attitude?
- What qualities do employers expect from their employees?

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NOTES

TA 110 *Terminating Employment*

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TA 111 *What Would You Do?*

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4) CLASS DISCUSSION/WRITTEN EXERCISE

Distribute copies of Teaching Aid 110, *Terminating Employment*, for students to read individually. Lead a class discussion on the importance of advance written notice of an employee's intent to terminate employment.

KEY QUESTIONS

- Why is written notice desirable?
- How much advance notice is appropriate?
- Why is it important for the employee to keep copies of all correspondence regarding employment and termination?

Have each student prepare a letter of resignation and exchange letters with another student. Have students read, review, and make suggestions for revisions to the letters. Instruct students to revise and rewrite their own letters. Have student volunteers read their letters of resignation to the class.



5) CASE STUDY/WRITTEN EXERCISE

After reviewing effective techniques to secure, maintain, and terminate employment, distribute a copy of Teaching Aid 111, *What Would You Do?* to each student. Tell students to pretend that the case study applies to them. They must decide what to do and write letters to both their current employer, Caprock Foods, and the company they have interviewed with, Mustang Wholesale, to inform each of their decision. Use student examples to review effective techniques to secure, maintain, and terminate employment.

FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: LINK UP to Jobs
- Power of One: Working on Working
- STAR Events: Job Interview; Interpersonal Communications; Skills for Life

RESOURCES

11E- The student is expected to identify ethical practices in the workplace.

1) CLASS DISCUSSION/WRITTEN EXERCISE

Lead a class discussion on workplace ethics. Define *ethics* for students as standards of professional conduct.

KEY QUESTIONS

- What are ethics?
- What are ethical standards that you expect from professionals you deal with such as your bank or your doctor? Why?
- What are examples of ethical standards that would be expected in nutrition and food industry careers? Why?
- What are "Codes of Ethics"?

Have students complete Teaching Aid 112, *Ethical Practices in the Workplace*. Discuss the students' responses to the questions on Teaching Aid 112.

2) CASE STUDY/GROUP ACTIVITY



Display Teaching Aid 113, *Ethics on the Job*, on the overhead projector. Have students write their responses to both situations and the question that follows. Divide students into triads to share their responses to the case studies. Have each triad draw conclusions and arrive at a group consensus. Bring the class back together and have the groups share their conclusions to the case study situations.

KEY QUESTION

- With the advancement of technology, what importance will employers of the 21st century place on ethics?

NOTES

TA 112 *Ethical Practices in the Workplace*

TA 113 *Ethics on the Job*

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FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: PLUG IN to Careers; ACCESS SKILLS for Career Success
- Power of One: Working on Working

RESOURCES

11F- The student is expected to practice problem solving using leadership and teamwork skills.

1) GAME



Have a group of ten student volunteers form a circle and hold hands. Instruct students to pass a hula hoop around the circle without breaking hand-holding. Have students do this once with no talking. Then have them do it a second time and allow them to talk. Next, add another hula hoop and instruct students to pass one hula hoop one direction and the other the opposite direction. Have students analyze this exercise in light of leadership teamwork skills. Lead a class discussion relating this activity to the importance of leadership and teamwork skills in all types of home, community, and workplace situations.

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KEY QUESTIONS

- What are leadership skills?
- What are teamwork skills?
- Who was the organizer in the group?
- Who was the leader?
- Who were the helpers?
- What skills are needed by leaders?
- What skills are needed by team members?
- Which team members did not panic under the stress of the second hula hoop?
- What contributions do each of these team members make toward achieving a group goal?
- How are these skills beneficial in our classroom laboratory?
- How are these skills beneficial in families?
- How are these skills beneficial in community and workplace situations?

2) GUEST SPEAKER



Invite a community leader to speak to the class regarding the skills and characteristics of effective leaders and effective team members. Emphasize that leadership and team members skills are important in family, career, and community roles. Following the presentation, select one student to explain the role of leadership in the Future Homemakers of America student organization and to ask the guest speaker to respond with ways these skills learned in high school will transfer to adult roles.

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FHA/HERO ACTIVITIES

- FHA/HERO Career Connection: PROGRAM Career Steps, INTEGRATE Work and Life
- Power of One: Take the Lead
- STAR Events: All categories
- Leaders at Work

RESOURCES

Nutrition and Food Science

Knowledge and Skills.

(12) Career preparation.

The student completes a supervised career-connections experience applying knowledge and skills developed in the study of nutrition and food science.

The student is expected to:

- (A) determine home and business applications of knowledge and skills developed in the study of nutrition and food science; and
- (B) utilize a career-connections experience to demonstrate occupational applications of competencies developed in the study of nutrition and food science.

12A- The student is expected to determine home and business applications of knowledge and skills developed in the study of nutrition and food science.

TO THE TEACHER

TEKS 12A and 12B are essential knowledge and skills for the supervised career-connections experience. Please refer to the section, *Supervised Career-connections Experiences*, in this instructional guide for examples of career-connections experiences for students enrolled in the Nutrition and Food Science course.

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RESOURCES

12B- The student is expected to utilize a career-connections experience to demonstrate occupational applications of competencies developed in the study of nutrition and food science.

TO THE TEACHER

TEKS 12A and 12B are essential knowledge and skills for the supervised career-connections experience. Please refer to the section, *Supervised Career-connections Experiences*, in this instructional guide for examples of career-connections experiences for students enrolled in the Nutrition and Food Science course.

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RESOURCES

Supervised Career-connections Experiences

NOTE TO THE TEACHER

Ideas in this section provide examples of career-connections experiences for students enrolled in the Nutrition and Food Science course. Career-connections experiences are designed to be extensions of school-based learning through entrepreneurial, research, or work-based applications (work-based applications include home, business, or community contexts). This is an extended learning arrangement, comparable to work-based instructional arrangements for occupationally-specific courses. Career-connections experiences may be designed as a singular substantial project to be carried out over the scope of the semester or a series of short term activities. Regular supervision and reporting will be necessary throughout the course for successful completion of the career-connections experience.

Essential Knowledge and Skills:

- 12A The student is expected to determine home and business applications of knowledge and skills developed in the study of nutrition and food science.
- 12B The student is expected to utilize a career-connections experience to demonstrate occupational applications of competencies developed in the study of nutrition and food science.



FHA/HERO projects and programs have been suggested throughout the course that, depending on depth and extent, could constitute a supervised career-connections experience.

Supervised Career-connections Experience

- 3A- The student is expected to explain the food pyramid and various dietary guidelines.***
- 5F- The student is expected to propose ways nutritional needs may be met by individuals in self-care, including children, older adults, and persons with special needs.***
- 7C- The student is expected to read and interpret food labels.***
- 7F- The student is expected to analyze food costs and budgeting needs.***
- 7G- The student is expected to design a variety of daily menus.***
- 8D- The student is expected to demonstrate safety and sanitation practices when handling, storing, preparing, and serving food.***
- 9A- The student is expected to demonstrate skills and procedures in applying principles of food preparation.***
- 9B- The student is expected to prepare nutritious foods appropriate for individuals, families, and small groups.***
- 11B- The student is expected to practice positive human-relations skills.***

THE STUDENT WILL:

1. Assist a person with special needs in planning meals for one week .
2. Gather resource information to be used in planning. Include an interview with the person with special needs to determine food preferences and food preparation capabilities, to gather information on the person's special dietary needs, and to explain the Food Guide Pyramid.
3. Plan menus for one week following necessary guidelines.
4. If possible, assist the person with special needs with grocery buying and preliminary preparation.
5. At the end of the week, discuss the results of the project with the person with special needs.
6. Summarize career applications of knowledge and skills learned through this experience.

THE STUDENT WILL SUBMIT FOR EVALUATION:

- a detailed record of the interviews in #2 and #5 above
- copies of the resource information used in planning the week's menus
- a copy of the week's menus
- a copy of the market order for groceries including cost of groceries
- a summary of the project experience, including #6 above
- parent or guardian evaluation with signature

Supervised Career-connections Experience

- 5A-** *The student is expected to identify ways food satisfies psychological and social needs.*
- 5B-** *The student is expected to discuss the role peer pressure and media play in food selections.*
- 5E-** *The student is expected to determine environmental influences on food purchases.*
- 7B-** *The student is expected to analyze the influence of advertising on consumer buying.*

THE STUDENT WILL:

1. Conduct a survey of three individuals responsible for family food purchases to determine the effects of advertising on food buying practices.
2. Gather resource information to be used in preparing and conducting the survey and related to how advertising affects food buying practices.
3. Prepare a survey form to be completed by the selected individuals.
4. Compile the results and prepare a written report of the findings and information related to how advertising affects food buying practices.
5. Summarize career applications of knowledge and skills learned through this experience.

THE STUDENT WILL SUBMIT FOR EVALUATION:

- copies of the resource information (or complete bibliography) related to how advertising affects food buying practices and information used in preparing the survey form
- copies of the completed survey forms and survey results (compilation)
- a written report of the findings and discussion of how advertising affects food buying practices
- a summary of the project experience (what you learned; see #5 above)
- parent or guardian evaluation with signature

Supervised Career-connections Experience

- 7A- *The student is expected to describe a variety of consumer food-buying strategies.***
- 7B- *The student is expected to analyze the influence of advertising on consumer buying.***
- 7E- *The student is expected to determine ways family members assuming multiple roles can apply food management skills.***
- 7F- *The student is expected to analyze food costs and budgeting needs.***

THE STUDENT WILL:

1. Compare and contrast food store services and pricing of two-three local food stores.
2. Gather resource information to be used in planning this project such as: types of consumer services commonly available in food stores; technology used in pricing, labeling and inventory; and, space allocations for products.
3. Visit the food stores to gather information.
4. Develop a compare and contrast diagram for illustrating the similarities and differences between the food stores.
5. Prepare a written report of the findings and background information including a complete bibliography of resources.
6. Summarize career applications of knowledge and skills learned through this experience.

THE STUDENT WILL SUBMIT FOR EVALUATION:

- a complete bibliography of resources used to gather background information
- the compare and contrast diagram used to illustrate the similarities and differences between the food stores
- a written report of the findings and background information related to the topic
- a summary of the project experience, including #6 above
- parent or guardian evaluation with signature

7

BLENDING ACTIVITY

1D - The student is expected to describe effects of nutritional intake on health, appearance, effective job performance, and personal life.

3D - The student is expected to apply dietary guidelines to meet nutritional needs throughout the life cycle.

4E - The student is expected to interpret nutrition assessment data from available technology.

CASE STUDY/GROUP ACTIVITY

Distribute copies of the case study on Teaching Aid 114, *The Relationship Between Nutrition, Health, and Wellness*, to each student (or each group). Instruct the students to read the case study and then complete the following activities.

1. Using the Recommended Dietary Allowances chart

Use the RDA chart to determine the daily allowances for the individuals in the case study.

2. Nutritional Analysis

Have students use nutritional assessment computer software to analyze the nutrient content of the foods eaten by each individual in the case study.

OR

Have students locate a Food Composition Table in the course textbook or other reliable nutrition resource. Using the day's food selections provided for each individual in the case study, prepare a chart that reflects the nutrient content of the foods eaten and then compute the daily nutrient totals.

3. Nutrient Comparison

Have students compare the nutrient information from the RDA with their nutritional analysis of each individual's dietary intake. Have students draw conclusions concerning the nutrient deficiencies.

4. Dietary Guidelines

Have students compare each individual's menus with the information provided in Teaching Aid 20, *A Pattern for Daily Food Choices*.

5. Draw Conclusions

Have students draw conclusions regarding how each individual's diet affects health, wellness, school and work performance, and energy levels.

6. Symposium

Using a symposium format, have students present their case studies, calculations, and resulting conclusions to the class. The presenters should be prepared to address questions concerning their case study from the class.

BLENDING ACTIVITY

- 1C - The student is expected to compare the nutritive value of various foods.*
- 4E - The student is expected to interpret nutrition assessment data from available technology.*
- 7G- The student is expected to design a variety of daily menus.*
- 8D- The student is expected to demonstrate safety and sanitation practices when handling, storing, preparing, and serving food.*
- 9A- The student is expected to demonstrate skills and procedures in applying principles of food preparation.*
- 9B- The student is expected to prepare nutritious foods appropriate for individuals, families, and small groups.*
- 9C- The student is expected to practice etiquette, food presentation, and table service appropriate for specific situations.*

PROJECT/LABORATORY EXPERIENCE

Have student laboratory groups plan ten dinner menus that can be prepared in one hour or less (this reflects dinner menus for a family for approximately two weeks). In planning the meals, the students should consider nutritional aspects, color, texture, and visual presentation. Students will select one of their dinner menus to prepare in the laboratory. Instruct the students to complete the following activities.

1. **Use resources to plan the dinner menus considering nutritional value, color, texture, cost, time, and energy.**

2. **Nutritional Analysis**

Have students use nutritional assessment computer software to analyze the nutrient content of the menu items for the meal they intend to prepare in the laboratory.

OR

Have students locate a Food Composition Table in the course textbook or other reliable nutrition resource. Using the menu items for the meal that they intend to prepare in the laboratory, have students prepare a chart that reflects the nutrient content of the foods then compute the nutrient totals.

3. **Market Order**

After having the selected menu approved by the teacher, have students prepare a market order for their meal.

4. **Laboratory Experience**

Have students prepare the complete meal within the one hour allotted time period.

5. **Evaluation**

Using a laboratory experience evaluation form, have each student evaluate the results of their meal preparation experience, including a written summary. Have student groups compare and contrast their ten menus.

BLENDING ACTIVITY

8A - The student is expected to identify potential safety and sanitation hazards.

8B- The student is expected to demonstrate safe and sanitary practices in the use, care, and storage of tools and equipment.

8C- The student is expected to describe food storage principles.

8D- The student is expected to demonstrate safety and sanitation practices when handling, storing, preparing, and serving food.

PROJECT/DEMONSTRATIONS

Divide the class into six groups: (1) Use, care, and storage of tools and equipment including electric tools and appliances; (2) Food storage principles for raw fruits and vegetables and uncooked meat, poultry, and fish; (3) Food storage principles for cooked foods and baked goods; (4) Food storage principles for shelf-stable foods and frozen foods; (5) Safety and sanitation practices when handling, preparing, and serving food; and, (6) Prevention of kitchen accidents and first aid for kitchen injuries (including poison control for toxic cleaning products). Assign each group member a specific task or responsibility; for example, each student in the first aid group would research a different topic (such as the treatment for different types of kitchen injuries such as burns, cuts, and falls), write the section for that topic, and present that part orally to the class.

1. Research

Use classroom, library, and Internet resources to gather information on the assigned topic.

2. Written report

Compose a written report on the assigned topic, including bibliography of references.

3. Product

Prepare a safety and sanitation product for consumer use, such as a chart that could be posted in the kitchen, a first aid kit, or a chart of emergency procedures and telephone numbers.

4. Oral Presentation/Demonstration

Conduct a demonstration and oral presentation for the class on the assigned topic. This can be a group presentation (e.g., The food storage group might demonstrate proper packaging of foods for freezing).

5. Evaluation

Ask each group to submit three or four assessment questions to be used in a class review of the information learned from the demonstrations and presentations.

BLENDING ACTIVITIES

Integration of FHA/HERO

CHAPTER ACTIVITIES

During February, have students prepare a variety of "heart healthy" foods and take them to social service agencies such as the Ronald McDonald House, Women's Protective Services, or children's shelters.

TEKS 8D, 9A-9D

During February, invite a representative of the American Heart Association (AHA) to speak to the chapter about the AHA and its functions. Have FHA/HERO members volunteer to work with the local AHA chapter in distributing pamphlets or providing assistance as needed.

TEKS 2A, 11A-11C, 11F

FHA/HERO members could participate in a fund raising campaign, donating the profits to the food bank or a similar organization. Members would be able to see how the money is utilized.

TEKS 11B, 11C, 11F

COMMUNITY SERVICE PROJECT

Have FHA/HERO members volunteer to assist nonprofit health organizations, such as those established for heart disease, kidney disease, or diabetes, with upcoming community events.

TEKS 11B, 11C, 11F

LEADERS AT WORK

Have students conduct a leadership project by selecting a leadership skill to work on such as interpersonal skills, communication skills, managerial skills, or entrepreneurial skills. If students are employed, they might ask their employer to assist them in choosing a leadership skill to work on. Have students use the FHA/HERO planning process in conducting their project.

TEKS 10B, 11B, 11C, 11D, 11F

POWER OF ONE

Family Ties: Project ideas include planning and/or preparing meals for family members, especially those with special needs. Students also could assist with grocery buying.

TEKS 3D, 4C, 5C, 5F, 6C, 7C, 7F, 7G, 8B, 8D, 9A-9C

Working on Working: Have students take an educational tour to talk to a dietitian, food scientist, cooperative extension service representative (family and consumer sciences), food editor, or consumer product specialist. Students could then research careers in the nutrition and food industry. Have students discuss qualifications, rewards, and demands of careers in the nutrition and food industry.

TEKS 10A, 10B, 11B, 11C

BLENDING ACTIVITIES

Integration of FHA/HERO

STAR EVENTS

Illustrated Talk: Ideas for topics include "Healthy Food Choices," "The Relationship of Food and Stress," and "Environmental Influences on Food Choices."

TEKS 2B, 3C, 5E

Entrepreneurship: Have students design a business where they develop a mission statement; write job descriptions for employees and owner, listing qualifications needed, write a want-ad for employees; do a cost analysis; and, research sources for purchasing equipment, materials, and other supplies.

TEKS 10A, 11B, 11C, 11F

STUDENT BODY

Have students plan and conduct a series of workshops on the importance of nutrition and wellness. Invite guest speakers such as a dietitian, consumer specialist, nutrition educator, cooperative extension service representative (family and consumer sciences), fitness/exercise specialist, or physician to share their expertise. The audience could include a variety of age groups. Students could develop flyers, posters, and newspaper articles to publicize the event. Have students follow-up with letters of appreciation to the guest speakers participating in the workshops.

**TEKS 1D, 1E, 2A, 2B, 2D,
5A, 5E, 7A, 7E, 7H,
11B, 11C, 11F**



Creative Ideas



NOTE TO THE TEACHER

Developers of the series of instructional guides for implementing Home Economics Education Texas Essential Knowledge and Skills faced a twofold challenge: (1) to write instructional strategies that enable students to acquire the stated essential knowledge and skills and (2) to help teachers deliver the strategies in ways that promote active learning, relevance, and retention in students.

After a great deal of experimenting and discussing, the following system seems best to address the twofold challenge, while providing maximum flexibility for you, the teacher, whom we consider the ultimate instructional expert in your classroom.

- The nature of the content of home economics provides wonderful opportunities for hands-on, relevant learning by students, and in many cases the instructional strategies themselves facilitate active learning.
- Teaching and learning activities in the instructional strategies section have been presented as briefly as possible. For instance, the strategy may state "Have students work in groups to ...," but no specific suggestions for grouping students are provided.
- The **Creative Ideas** section has been included to provide you with suggestions and examples of ways to enhance some basic techniques included in the **Instructional Strategies** section. For example, it does provide several specific suggestions for grouping students.
- The **Blended Activities** section promotes student learning of multiple TEKS through hands-on, project-based, and/or problem-solving activities.
- Integration of FHA/HERO activities as appropriate throughout the instructional strategies and blended TEKS activities promotes student learning through relevance and application.

We strongly encourage you to:

- Read this section! Not only will it provide ideas for promoting active learning, but it will provide additional suggestions for saving teacher time and enhancing student learning and skills development.
- Link appropriate creative teaching techniques to specific instructional strategies in your Teacher's Instructional Guide.
- Adapt the instructional strategies and creative teaching techniques to fit your district needs, the needs and learning styles of your students, and your own teaching style.
- Add to this section! Resources that offer creative teaching ideas are readily available. Professional development conferences continually offer sessions that promote active learning, authentic assessment, varied learning styles, etc.

This section provides only a small sampling of creative ideas for teaching techniques!

Creative Ideas



GROUP ACTIVITY/TEAMWORK

When to use: In activities where teamwork facilitates generation of ideas and higher-order learning. Working in groups also meets needs of students with global learning styles.

Skills reinforcement: Teamwork and leadership skills, communication skills, interpersonal skills

Methods of grouping students:

There are many methods of randomly assigning students to groups. Several examples are provided below. You can pick up other ideas through brainstorming, networking, and personal participation in group activities. (Note that methods will vary depending on the number you want in each group.) Dividing students into groups can be a quick way to inject some fun into an activity.

- **Count Off.** Have students count off 1 through however many groups are needed, repeating until all students have a number. Select a location for all "1s" to work, all "2s", etc.
Variation – write the numbers on cards and have students draw.
- **Geography.**
 - For pairing students, have them draw cards with names of states and capitals. Students find the classmate with the matching state or capital.
 - Have students draw from cards with names representing geography sets, such as names of continents, oceans, countries, rivers, etc. Students will need to figure out what their name represents, and find the others with cards in the same set.
- **Course content.** (Similar to the above activity, except using concepts from the course.)
 - For pairing students, have them draw cards listing either elements and principles of design or corresponding definitions. Students find the classmate to match the term and definition.
 - Have students draw from cards representing nutrition sets, such as foods from different food groups. Students find others with cards in the same set.
- **Famous Fictional Characters.** Have students draw cards with names of characters from literature they have recently studied in Language Arts, famous fictional characters (such as characters from Peter Pan or The Wizard of Oz), well-known television shows, etc.
- **Puzzles.** Purchase or create puzzles, mix up the pieces, and have students find group members with matching puzzle pieces. Hint – if you have puzzles with more pieces than needed for group members, pull out the number of pieces needed for students to draw, leave the remaining pieces on the table where the group will meet, and have students circulate among tables until they find their correct puzzle and meet up with other group members.
- **Deck of Cards.** A deck of cards (or multiple decks) can be used in many ways to form various sizes of groups. Students can form groups based on suits, colors, face cards, or combinations (such as a full house or four-of-a-kind).
- **Candy Flavors.** Have students group according to flavors of candy or colors, for example, of M&Ms. This provides students with a nice treat also!
- **Self-selection.** Allow students to select their own group members. Have students group with students nearby, or find students with whom they have not recently worked.

GROUP ACTIVITY/TEAMWORK (Continued)

Suggestions for Effective Group Activities:

The size, structure, and function of a group will differ depending on specific objectives of the activity. Following are a few suggestions for helping students work most effectively in groups.

- Clarify expectations. Make sure all group members know what is expected of each person individually and what the group is expected to accomplish as a whole.
- Set time limits. Let groups know up-front how long they will have to work. If it is a lengthy activity, provide time checks periodically. Let groups know when they have one to two minutes remaining, and signal when time is up. Examples of signals include flipping a light switch, clapping, using a sound signal (bell, kazoo, train whistle, etc.), or playing music.
- Make individual assignments where appropriate to the activity. Possibilities include leader or facilitator, recorder, timekeeper, or runner.
- Emphasize the importance of each member's contributions, through participation, encouragement, focus on the task, and contribution to the final product. Build in individual accountability.

Build in individual accountability!

When participating in engaging, active learning experiences, it is important that students understand that they are accountable for learning. It may be tempting for students, when working in groups, watching a video, or listening to a guest speaker, to view the experience more as a "fun activity" than as a learning experience. While the experiences are intended to be enjoyable, students need to understand that the underlying purpose is to enable them to acquire essential knowledge and skills.

Following are suggestions for building individual student accountability into group and teamwork activities, as well as classroom discussions, videotape viewing, guest speakers, educational tours, etc.

- Set the stage for learning. Frame each activity within the context of essential knowledge and skills students are expected to acquire. In other words, help them up front to see the relevance of learning activities.
- Structure the group to promote accountability. For example, each student within the group could be assigned a specific role. Or each member might be responsible for a specific part of the product. Provide a means of assessing each student's effectiveness.
- Vary the methods through which students report group findings and results. For example, if there is one "reporter," other group members may not feel as accountable as that designee. If, however, the teacher randomly calls on group members for reports, all members will need to be prepared. Provide an occasional variance by having group members return to their desks and write individual accounts of group results.

It should not be necessary to implement such suggestions for every activity. By varying the process, randomly calling on groups or individuals, occasionally requiring written accounts, etc., the teacher sends the message that students are individually accountable and need to be involved and attentive.

Creative Ideas



RESOURCE PERSONS (GUEST SPEAKER/PANEL DISCUSSION)

When to use: Good for providing information not readily available in textbooks, information that is new, or that which is best presented in a “real-world” perspective. With new information becoming available so rapidly, this method offers unique opportunities to provide students with the latest perspectives. It also provides students with opportunities to hear information straight from “experts,” promoting credibility and relevance to students.

Skills reinforcement: This method provides rich opportunities for promoting a variety of skills. The following suggestions provide students excellent practice for improving and applying verbal, nonverbal, written, and electronic communication skills. Rotate these responsibilities throughout the semester so various students have an opportunity to perform different tasks. (The following suggestions can also save the teacher much time!)

- Have students help make initial contacts with the guest speaker or panel participants. Let students practice or role play making contacts via telephone or in person. Work with them to initiate and follow through on actual contacts.
- Have students introduce the topic and guests. Guide students in writing appropriate introductions for speakers or panel members. Make sure students are prepared to make the actual introduction before the presentation.
- Have one or more students write each participant a thank-you note expressing appreciation from the class. You may suggest that the note be handwritten and point out the appropriateness of personalized, handwritten thank-you notes. Or students may utilize computer applications to compose the note. Have students create a class letterhead for correspondence.

Suggestions for maximizing guest resources. Teachers have expressed that it is time-consuming to arrange for several guest speakers or panels each semester and that they do not want to call upon the same persons frequently. Use student participation as suggested above to save teacher time. Use technology to expand access to resource persons and to build a resource file for future reuse.

- Videotape the classroom presentation by the speaker/panelists. The videotape can be viewed by students who may have been absent and can be added to a resource file for use with later classes. This eliminates the need to arrange for several “live” presentations each semester. This is especially critical in small communities where the same “experts” would likely be called upon time after time.
- Utilize videoconferencing facilities to connect students in the classroom with the speaker/panelists in another location. Record the videoconference for review and reuse. This can be especially helpful in small communities where resource persons for various topics may not be available.
- Videotape or audiotape the resource persons at their locations, or audiotape (with permission) responses to information inquiries over the telephone.

Alternative: have students conduct audiotaped interviews to solicit information and present the information in the format of a television newscast or documentary.

Creative Ideas



ORGANIZING AND PRESENTING INFORMATION: VISUAL DISPLAYS, BROCHURES/FLYERS, PRESENTATIONS

When to use: As students research and collect varied information, these techniques enable them creatively to compile and organize; to share information with classmates and potentially other audiences.

Skills reinforcement: Depending on how the activity is structured – communication skills (verbal, nonverbal, written, electronic); teamwork and leadership skills; interpersonal skills; management and problem-solving skills; organizational skills

Suggestions for effective visual displays and presentations:

- Incorporate the use of computers and technology applications where appropriate.
- Choose techniques that fit learning objectives; in some cases, that might best be students in groups writing ideas on large sheets of paper to be posted around the room. Or it may be a multimedia presentation to be presented at an all-school assembly.
- Some activities may best be done individually; some by groups. Consider learning objectives, as well as learning styles of students.
- Visual displays and presentations provide an opportunity for authentic assessment of student learning on a topic.
- Allow students to generate ideas for organizing and presenting information.
- Where feasible and appropriate, keep outstanding student products for future use.

Miscellaneous ideas for organizing and presenting information:

- listing of ideas on large sheets of paper
- display of items (i.e., sewing notions for clothing repair)
- graffiti mural where students take markers and share key points learned
- bulletin board
- overhead transparency
- *large index cards for recording information from research, interviews, observations, and bibliographic information from printed references
- *graphic organizers for effectively organizing ideas and research findings
- brochure/booklet describing information about a topic; Teaching Aid 72, **Brochure Assessment**, provides a tool for evaluating the effectiveness of a brochure
- flyer/circular promoting key points related to a topic
- bookmark citing useful information about a topic
- newsletter
- oral presentation (vary through skit, monologue, or puppet presentation)
- written presentation
- poster presentation (sharing research findings)
- videotape presentation
- photo album or display
- multimedia presentation utilizing a combination of print and electronic media

- * Detailed suggestions for compiling and organizing information are included in Appendices G and H of *Independent Study in Home Economics Education*, available from the Home Economics Curriculum Center. An example of a web diagram is shown in Teaching Aid 115, **Web Diagram**.

Creative Ideas



CASE STUDIES AND SCENARIOS

When to use: As a tactful way to address sensitive issues. Allows students to express their views and examine the views of others in a non-judgmental manner around hypothetical, fictional situations.

Skills reinforcement: Problem-solving; creative and critical thinking; verbal, nonverbal, and written communication skills; leadership and teamwork skills

Case studies and scenarios are very similar in nature, and the terms are often used interchangeably. Both describe hypothetical circumstances and characters, and both set up a situation for analysis and application of problem-solving skills. As presented in this instructional guide, a case study provides more details about a specific situation and each character involved. A scenario is a brief synopsis of a set of circumstances or sequence of events.

Suggestions regarding case studies and scenarios:

- Where case studies or scenarios have been provided with the instructional strategy, read them to be sure they are appropriate for your instructional environment and local district policies. You may choose to adapt them or have students write new ones.
- Writing original case studies or scenarios is a good opportunity for students to create situations related to the topic that are most relevant to them. The writing experience also develops communication skills and provides TAAS reinforcement.
- Remind students that case studies and scenarios should be written as fictional.
- Newspaper articles and periodicals, such as parenting and family magazines, can provide stimulating ideas for case studies and scenarios.
- Case studies and scenarios can be presented in creative formats, such as that of an advice column or an "Ask an Expert" column.
- Use case studies and scenarios written by students to build a resource file for future use.

Creative Ideas



LISTENING TEAMS

When to use: To promote attentiveness during presentations by guest speakers or panels, videotapes, observation assignments, or other viewing/listening activities. Requires students to listen specifically for certain points or ideas.

Skills reinforcement: Communication skills, especially listening; leadership and teamwork

Suggestions for effective use of listening teams:

Prior to a presentation, lecture, or videotape, divide students into listening teams. Give each team a specific assignment or role, so they will know up-front what they need to listen for. Let students know they will be responsible afterwards for reporting to the class, in writing or orally, the results of their assignment. Examples of listening team assignments or roles include the following:

- Provide students with a list of topics to be covered. Assign each team one or more specific topic(s) for which to listen during the presentation. Have them summarize key points related to their assigned topic following the presentation.
- Have each listening team write questions related to an assigned topic prior to the presentation. Students must listen during the presentation for answers to questions they wrote.
- Assign each team a specific role during the presentation. For example, one team might prepare questions based on information presented, another might summarize the five most important points, another might identify issues for further discussion or clarification, etc.



DEBATE

When to use: When there are two sides to an issue – pros and cons, advantages and disadvantages, etc. Debate promotes critical thinking and requires students to research, look at all sides of an issue, and draw conclusions.

Skills reinforcement: Communication skills; critical thinking skills; research skills

Clarification and suggestions related to classroom debates are provided in Teaching Aid 116, ***Guidelines for a Classroom Debate***.

Creative Ideas



BRAINSTORMING

When to use: When you want students quickly to generate as many ideas as possible about a topic; to get ideas “on the table” before discussing or analyzing them. Useful when you want to begin with students’ ideas or understanding about a topic.

Skills reinforcement: Communications skills

Suggestions for effective brainstorming:

Create an environment where students feel free to let ideas flow freely. The brainstorming process is not the time for discussing or critiquing input.

Brainstorming variations:

- Have a student volunteer record ideas as they are generated by members of the class.
- Have students work in small groups to brainstorm ideas on a topic. Lead group to take turns sharing ideas.
- Have individuals brainstorm ideas by writing them on small post-it notes. Then have students post the notes around the room. This works well when ideas later need to be categorized.
- Popcorn Planning: Have students think of themselves as part of a giant popcorn popper; have them jump up and share ideas as they come. Serve popcorn at the close of the lesson. (Idea from Janis P. Meeks, *Time to Teach* series.)



GAMES

When to use: Good when students need to learn or review facts and details. Provides a fun way to commit details to memory and practice recalling.

Skills reinforcement: Communication skills; interpersonal skills; games involving team competition promote leadership and teamwork skills

Suggestions for games:

Instructions for a Jeopardy game are provided in Teaching Aid 2, **“Jeopardy” Game Instructions**. Ask students to suggest other game formats they would enjoy using, and let them develop the games and make up a clever title for each game. Writing clear instructions and verbally explaining them will be excellent practice of communications skills. The process of preparing questions or facts to be used in the game will require researching and reviewing content information, thus promoting learning.

Creative Ideas



INTERNET ACTIVITIES

When to use: In locating new, updated information; to enhance or replace information provided by references and textbooks, which may be outdated.

Skills reinforcement: Communication skills (written and electronic); research skills

The Internet provides hands-on opportunities for students to research information through a medium with which most of them are familiar. Following are miscellaneous suggestions related to creative use of the Internet in instruction:

- The convenience of Internet access will vary among school districts. Your students may have access to the Internet in various classrooms, in a computer lab or library, or in many of their homes. Assignments related to Internet research should be structured accordingly.
- Student skills in exploring the Internet will also vary (as will skills of teachers). You may want to invite a resource person to assist students with the first assignment involving Internet search, or plan an educational tour to a computer lab where students can conduct the assignment under supervision of someone with Internet expertise.
- Review common Internet terminology, such as terms defined on Teaching Aid 117, **Internet Terminology**.
- Provide students with guidelines regarding Internet use and safety. Some accepted rules of conduct for Internet users are provided in Teaching Aid 118, **Netiquette**.
- If the majority of students are not experienced in using the Internet, begin by assigning a specific Web site for them to visit for information related to a specific topic. Have students summarize key information learned from the Web site. If the site has hyperlinks, ask students to check them out to see what additional information the sites lead to.
- As students become more experienced, have them conduct Web searches, using available Web browsers or search engines. When students conduct Web searches, remind them to:
 - note what key words were used, most especially those that worked to locate information
 - take notes about the topic they are researching, and print out information as appropriate (Have students be sure to note on any printouts the Web address of the source. This is important for bibliographic reference, and to be able to return to the site later for clarification or further information.)
- It is also helpful to diagram the path of a Web search. Begin the diagram with the name and Web address of the browser used to search. Plot the name and Web address of each location along the path of the search. This will facilitate relocation of informative sites in the future.
- Use the expertise of students to teach other students, and even the teacher, Internet skills!

Creative Ideas



LET STUDENTS HELP!

When to use: To promote student involvement, provide an opportunity for skills development, capitalize on student skills and creativity, and save the teacher time! Also, since each teacher has a preferred learning style, involving students broadens the types of learning experiences to meet the needs of students with learning styles that differ from those of the teacher.

Skills development: Provides a multitude of opportunities for promoting various skills, including communication (verbal, nonverbal, written, and electronic); teamwork and leadership; interpersonal; management and problem-solving; organizational

The following are just a sampling of ideas for student involvement in planning and implementing instructional experiences. Be sure to work with students to prepare them to perform each task successfully. This may entail practicing or role playing situations in advance. And, of course, supervise students to ensure appropriateness and accuracy of information gathered.

Examples of tasks students can perform include the following:

- Make contacts to arrange for guest speakers or panelists.
- Help with classroom correspondence; for example, write thank-you notes to guest speakers, persons who helped with learning tours, and other supporters of class projects and activities.
- Write for information on topics or products. (Provide students with resource lists, or have them help conduct Web searches to locate sources of information on topics.)
- Audiotape or videotape interviews on location with resource persons.
- Videotape segments of movies or television shows illustrating relevant concepts.
- Provide CDs/songs that relate to the lesson (to be played in opening or closing a lesson, or to emphasize a specific point – good for global learners!).
- Perform Web searches.
- Clip newspaper articles relevant to lessons. (Create an “In the News” resource file for ongoing use.)
- Collect examples of items to reinforce classroom learning, such as food labels, appliance use and care manuals, clothing labels, credit card terms and solicitation letters, etc.
- Design bulletin boards.
- Help find cartoons, relevant or humorous quotes, anecdotes, and jokes relevant to topics.
- Develop games for use in learning or reviewing factual material.
- Write test or review questions on material covered.
- Develop project criteria and rubrics.

Resources

American Alliance for Health, Physical Education, Recreation, and Dance
1900 Association Drive
Reston, VA 20191
(703) 476-3400

American Association of Family and Consumer Sciences
1555 King Street
Alexandria, VA 22314-2752
(703) 706-4663
www.aafcs.org

American Association of Family and Consumer Sciences. (1993). *Handbook of Food Preparation (9th Ed.)*.

American Cancer Society
1599 Clifton Road NE
Atlanta, GA 30329
(800) 227-2345
www.cancer.org

American Cancer Society, 1990. *Changing the Course, K-12 Nutrition Curriculum*.

American College of Sports Medicine
P.O. Box 1440
Indianapolis, IN 46206-1440
(317) 637-9200

American Council on Exercise
Consumer Fitness Hot Line
(800) 529-8227

American Dietetic Association (ADA)
National Center for Nutrition and Dietetics
216 West Jackson Blvd.
Chicago, IL 60606-6995
www.eatright.org

American Heart Association
7272 Greenville Avenue
Dallas, TX 75231
(214) 373-6300
(800) 242-8721
www.amhrt.org or www.americanheart.org

American Medical Association (AMA)
515 North State Street
Chicago, IL 60610-4377
(312) 464-5000
www.ama-assn.org

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Resources - Continued

Aunt Edna's Kitchen

www.cei.net/~terry/auntedna/

Cancernet (See National Cancer Institute)

www.cancernet.nci.nih.gov

CDC Nutrition and Physical Fitness Programs

www.cdc.gov/needphp.dnpa

Center for Science in the Public Interest

www.cspinet.org

Cooperative Extension Service, Kansas State University

www.oznet.ksu.edu/ext-f&n

Dairy Council

www.familyfoodzone.com/

Duyff, Roberta Larson, 1998. *The American Dietetic Association's Complete Food and Nutrition Guide*. Minneapolis, MN: Chronimed Publishing.

E-SPAN

www.espan.com

Education Service Centers. (Contact local school district office for phone numbers.)

Extension Food and Human Nutrition

agweb.tamu.edu/ansc/nutr/nutr.htm

Fast Food Facts, Minnesota Attorney General's Office

E-mail: consumer.ag@state.mn.us

[www.olen.com/food/](http://www olen.com/food/)

Fifty-Plus Fitness Association

P.O. Box D

Stanford, CA 94309

(415) 323-6160

Food Allergy Network

10400 Eaton Place

Suite 107

Fairfax, VA 22030

(703) 691-3179

www.foodallergy.org

Resources - Continued

Food and Drug Administration (FDA)

Consumer Information Office
5600 Fishers Lane, HFE 88
Rockville, MD 20857
(301) 443-3170
www.fda.gov

Food and Nutrition Board of the National Academy of Sciences

2101 Constitution Avenue, SW
Washington, DC 20418
(202) 334-1732
www2.nas.edu/fnb/

Food and Nutrition Information Center/USDA

National Agricultural Library
Room 304
20301 Baltimore Avenue
Beltsville, MD 20705-2351
301/504-5719
www.usda.gov/fnic

Food Finder

[www.olen.com/food](http://www olen.com/food)

Future Homemakers of America, Inc.

1910 Association Drive
Reston, VA 22091
(800) 234-4425
www.fhahero.org

Future Homemakers of America, Inc.

Texas State Association
8140 Burnett Road
Austin, TX 78766
(512) 459-3269

Future Homemakers of America, Inc. 1998. *FHA/HERO Career Connection*.

Future Homemakers of America, Inc. 1993. *Financial Fitness*.

Future Homemakers of America, Inc. 1999. *Leaders at Work*.

Future Homemakers of America, Inc. 1997. *Power of One*.

Gershoff, S. 1990. *The Tufts University Guide to Total Nutrition*. New York: HarperPerennial.

In Polite Company

www.food.epicurious.com

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Resources - Continued

International Center for Sports Nutrition

502 South 44th Street
Suite 3012
Omaha, NE 68105-1065
(402) 559-5505

Home Economics Curriculum Center

Texas Tech University
Box 41161
Lubbock, TX 79409-1161
806/742-3029
www.hs.ttu.edu/hecc

Home Economics Curriculum Center, 1997. *Skills for Life*.

Home Economics Curriculum Center, 1999. *Essentials for Home Economics Education: The Cornerstone*.

Monster Board

www.monster.com

National Association of Colleges and Employers

www.jobweb.org

National Cancer Institute

National Institutes of Health
31 Center Drive, Building 31, Room 10A07
Bethesda, MD 20892
(800) 422-6237
www.cancernet.nci.nih.gov

Nutrition Counseling Education Services

www.ncscatalog.com

National Dairy Council

O'Hare International Center
10255 West Higgins Road
Suite 900
Rosemont, IL 60018-5616
(847) 803-2000

National FFA Foundation. *Food Science, Safety, and Nutrition: Curriculum Guide*.

www.ffa.org/foundation/index.html

National Kitchen and Bath Association

www.nkba.org/consumer.html

Nutrition Navigator, Tufts University

navigator.tufts.edu

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Resources - Continued

Oncolink

University of Pennsylvania
www.oncolink.upenn.edu:8083/

Online Career Center

www.occ.com/occ/

President's Council on Physical Fitness and Sports

701 Pennsylvania Avenue
Suite 250
Washington, DC 20004
(202) 272-3421

Searce, C. 1992. *100 Ways to Build Teams*. Palatine, IL: IRI/Skylight Publishing.

Smith, Jeff. 1990. *The Frugal Gourmet: On Our Immigrant Ancestors*. New York: William Morrow and Co., Inc.

Texas Agricultural Extension Service

agextension@tamu.edu or www.fcs.tamu.edu

Texas Department of Health

www.tdh.texas.gov/

The Kitchen Network

www.kitchen.com

The University of Texas Institute of Texan Cultures at San Antonio. 1989. *The Melting Pot: Ethnic Cuisine in Texas*. Austin, TX: The University of Texas.

United States Department of Agriculture (USDA) (see Food and Nutrition Information Center)

www.usda.gov

Wild Blueberry Association of North America

www.wildblueberries.com/
www.realblueberries.com/

Women's Sports Foundation

Eisenhower Park
East Meadow, NY 11554
(800) 227-3988
(516) 542-4700

YMCA of the USA

101 North Wacker Drive
Chicago, IL 60606
(800) 872-9622

Terms Related to Nutrition, Health, and Wellness

nutrition

wellness

foodborne illness

RDA

calorie

basal metabolic
rate

malnutrition

fad diets

cholesterol

nutrient deficiency

nutrients

complex
carbohydrates

food fads

dehydration

fiber

additives

vegetarian

eating disorders

digestion

anemia

enriched foods

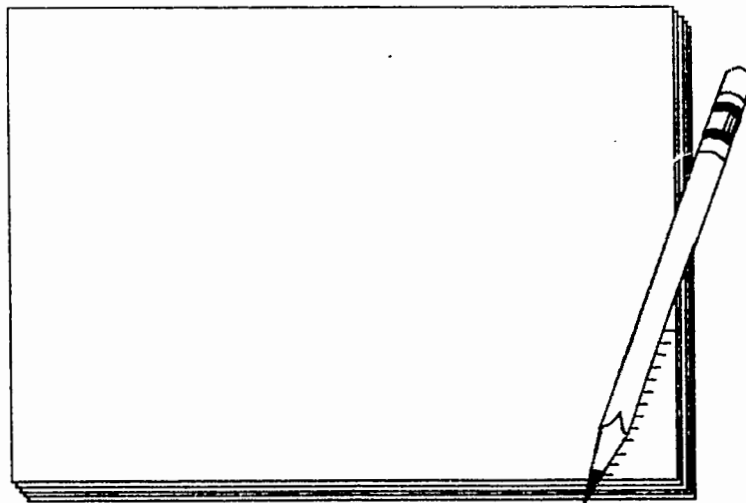
dietary supplements

antioxidants

fortified foods

"Jeopardy" Game Instructions

1. Use questions and answers written on 3x5 cards (answer on the front, question on the back) as subject matter for the "Jeopardy" game.
2. Divide 3x5 cards into three stacks. Assign cards in each stack 10 points, 20 points, and 30 points, respectively. Write the point value on the front of the card (along with the answer).
3. Form teams of 3-4 students, and give each team a colored "responder" card.
4. Have each team select a team captain and team scorekeeper.
5. The teacher reads aloud the answer from a card. The team captain who holds up the responder card first has the first opportunity to answer.
6. All team responses must be given in the form of a question. For example, you say, "providing their children proper nutrition." The correct student response would be something like, "What is a responsibility parents have related to the physical development of their children?"
7. If the first team to respond gives the correct answer, they receive the point value for that item. If they answer incorrectly, then the point value is subtracted from their score and another team is given the opportunity to answer.
8. The team captain must confer with the team members before responding with a question.
9. The team captains hold up the "responder" card when their team is ready to respond. Only the team captain can hold up the responder card.
10. The team scorekeeper is responsible for keeping the correct score for the team. The scorekeeper should be included in determining the correct responses.
11. The team with the highest score is the winner.



Points to Ponder About Digestion

Digestion is the process the body uses to transform food into a form it can use. There are six key points in the digestion process.

MOUTH

Here the food is softened by saliva and crushed by the teeth (chewing) into smaller pieces. The enzyme ptyalin found in saliva helps to break down complex carbohydrates (starches) into simple carbohydrates (sugars). For this reason, a starchy food, such as a saltine cracker, will taste sweet as the starch is broken down in the mouth.

ESOPHAGUS

After food is swallowed, it is moved by the esophagus to the stomach. The esophagus is approximately 12 inches long. Peristaltic waves move food along the entire digestive tract.

STOMACH

Food is churned through peristaltic waves and broken down by gastric juices which include hydrochloric acid and the enzyme pepsin. As the stomach churns food, pepsin and hydrochloric acid work to break down protein. Liquids are digested quickly. In contrast, solids may take approximately four hours to digest. Foods that are chewed well leave the stomach more easily than large pieces. Fats stay in the stomach the longest and provide satiety or satisfaction.

SMALL INTESTINE

After leaving the stomach, food enters the upper part of the small intestine called the duodenum. Food is mixed and combined with digestive chemicals: bile from the liver, pancreatic juice from the pancreas, intestinal fluids, and enzymes. Food is broken down into nutrients the body can use:

- Carbohydrates change to the simple sugar, glucose.
- Fats change to fatty acids which provide energy and glycerol.
- Proteins change to amino acids.
- Vitamins and minerals remain basically unchanged.

The small intestine is lined with hairlike projections called villi. Villi filter and absorb the materials from the small intestine. The nutrients are moved to the blood vessels and carried to the liver. Villi then help move the waste products to the large intestine.

LIVER

The liver manufactures, changes, and stores nutrients and chemicals needed by the body. The liver turns glucose, a simple sugar used for energy, into glycogen, a form of sugar, for storage. The liver converts glycogen to glucose and sends it to the bloodstream when the body needs it. The liver recycles iron and worn-out blood cells from the blood.

LARGE INTESTINE

Bacteria needed for digestion and formation of certain vitamins is found here. In the large intestine water is absorbed and sent to the kidneys. Fiber from food absorbs some of that water, however, and helps to soften waste so it is eliminated more easily. Waste products (bacteria, excess nutrients, and what is left of the food) are excreted. Approximately 10 percent of the food eaten ends up as waste.

DIGESTION QUIZ

1. The process which transforms food into a form the body can use is called _____.
2. Liquids which soften food in the mouth are _____.
3. An enzyme that begins to digest starch into sugars is _____.
4. The part of the digestive system that moves chewed food to the stomach after food is swallowed and is about twelve inches long is the _____.
5. Liquid secreted by the liver to aid in the digestive process is _____.
6. The upper part of the small intestine is called the _____.
7. The building blocks of protein are _____.
8. A simple sugar used by the body for energy is _____.
9. A form of fat which the body uses for energy is _____.
10. Wave-like contractions that move food along the digestive tract are called _____.



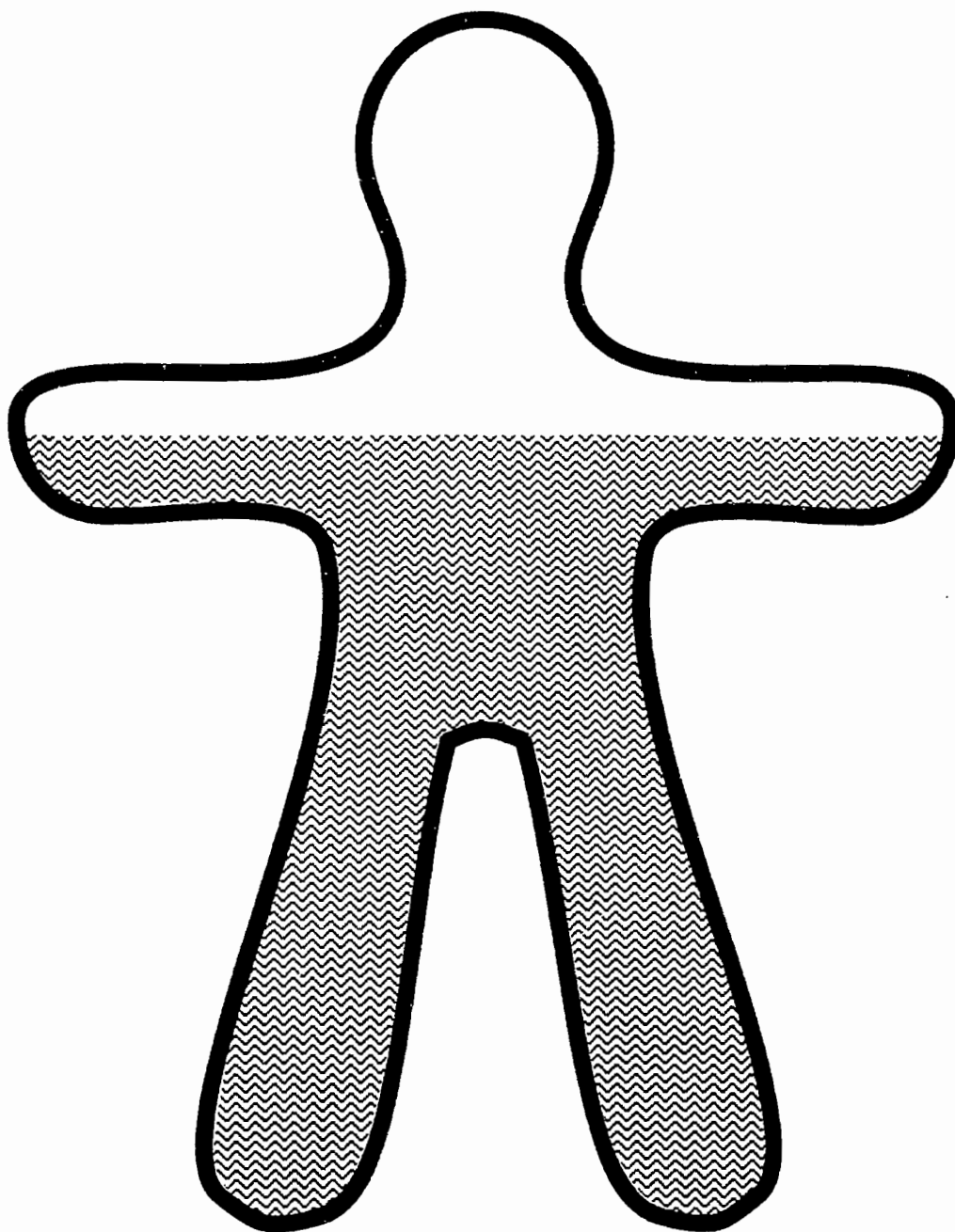
Nutrients

Nutrients	Functions	Food Sources
<i>Vitamins</i>		
Water soluble vitamins		
Vitamin C (Ascorbic Acid)		
Thiamin		
Riboflavin		
Niacin		
Folate		
Vitamin B ₁₂		
Fat soluble vitamins		
Vitamin A		
Vitamin D		
Vitamin E		
Vitamin K		

Nutrients, Cont'd.

Nutrients	Functions	Food Sources
Minerals		
Calcium		
Sodium		
Iron		
Iodine		
Magnesium		
Potassium		
Carbohydrates		
Protein		
Fat		
Water		

Dehydration and the Human Body



55-70 percent
of a human's
body is composed
of water

- lose about 2 percent of body weight in fluids and become thirsty
- lose about 4 percent of body weight in fluids and become weak
- lose about 20 percent of body weight in fluids and lapse into a coma or die

Nutrients and You

Directions: Fill in the blanks by naming the nutrients that perform the stated functions. Use facts supplied by your teacher or found in current nutrition references.

FOOD GROUPS	NUTRIENTS	FUNCTIONS
Breads, Cereals, Rice, and Pasta	1. _____	1. Provides energy
	2. _____	2. Aids growth of new tissue and repair of body cells; promotes growth; provides energy
	3. _____	3. Helps release energy; promotes healthy nervous system
	4. _____	4. Prevents some types of anemia; helps cells use oxygen; helps form red blood cells
Fruits	5. _____	5. Helps hold body cells together; helps wounds heal; helps teeth and bones develop
	6. _____	6. Promotes good eyesight; helps keep skin healthy; promotes growth
	7. _____	7. Prevents some types of anemia; helps cells use oxygen; helps form red blood cells
	8. _____	8. Provides energy; helps body use protein and fat
Vegetables	9. _____	9. Promotes good eyesight; helps keep skin healthy; promotes growth
	10. _____	10. Helps hold body cells together; helps wounds heal; helps teeth and bones develop
	11. _____	11. Helps release energy; promotes healthy nervous system
	12. _____	12. Helps in the formation of normal blood cells
	13. _____	13. Builds strong bones and teeth; helps to clot blood
	14. _____	14. Assists in muscle contraction; maintains fluid and electrolyte balance; aids nerve impulses
Meat, Poultry, Fish, Dry Beans and Peas, Eggs, Nuts, and Seeds	15. _____	15. Aids growth of new tissue and repair of body cells; promotes growth; provides energy
	16. _____	16. Prevents some types of anemia; helps cells use oxygen; helps form red blood cells
	17. _____	17. Helps produce energy; promotes healthy nervous system; makes cells work properly
	18. _____	18. Provides energy and calories; carries fat-soluble vitamins
Milk, Yogurt, and Cheese	19. _____	19. Builds strong bones and teeth; helps to clot blood
	20. _____	20. Helps calcium build strong bones and teeth; aids cells in producing energy
	21. _____	21. Aids growth of new tissue and repair of body cells; promotes growth; provides energy
	22. _____	22. Provides energy and calories; carries fat-soluble vitamins
Fats Sweets	23. _____	23. Provides energy and calories; carries fat-soluble vitamins
	24. _____	24. Provides energy only

Nutrients and You Answer Key

1. Complex carbohydrates
2. Protein
3. Thiamin
4. Iron
5. Vitamin C
6. Vitamin A
7. Iron
8. Carbohydrates
9. Vitamin A
10. Vitamin C
11. Thiamin
12. Water
13. Calcium
14. Potassium
15. Protein
16. Iron
17. Niacin
18. Fat
19. Calcium
20. Phosphorus
21. Protein
22. Fat
23. Fat
24. Carbohydrates

Food Composition Table

FOODS	WT (g)	KCAL	PRO (g)	CHO (g)	FAT (g)	PUFA (g)	SFA (g)	CHOL (mg)	A (RE)	C (mg)	B-1 (mg)	B-2 (mg)	NIA (mg)	Ca (mg)	Fe (mg)	Na (mg)
Vegetables																
Broccoli, frozen, chopped 1/2 cup	92	25	2.9	4.9	0.1	0.1	0	0	174	37	0.05	0.08	0.4	47	0.56	22
Carrots, canned, 1/2 cup slices	73	17	0.5	4	0.1	0.1	0	0	1006	2	0.01	0.02	0.4	19	0.47	176
Green beans, canned, 1/2 cup	68	13	0.8	3.1	0.1	0	0	0	24	3	0.01	0.04	0.1	18	0.61	170
Lettuce salad, 1/2 cup shredded	28	5	0.4	1	0.1	0	0	0	53	5	0.01	0.02	0.1	19	0.39	3
Potatoes, hash brown, homemade 1/2 cup	78	163	1.9	16.6	10.9	1.3	4.2	*	*	5	0.06	0.02	1.6	6	0.63	19
Spinach, 1/2 cup boiled	90	21	2.7	3.4	0.2	0.1	0	0	737	9	0.09	0.21	0.44	122	3.21	63
Tomato, 1 raw	123	24	1.1	5.3	0.3	0.1	0	0	139	22	0.07	0.06	0.7	8	0.59	10
Fruits																
Apple, raw w/ skin 1 med.	138	81	0.3	21.1	0.5	0.1	0.1	0	7	8	0.02	0.02	0.1	10	0.25	1
Apricots, raw 3 med.	106	51	1.5	11.8	0.4	0.1	0	0	277	11	0.03	0.04	0.6	15	0.58	1
Banana, raw 1 med.	114	105	1.2	26.7	0.6	0.1	0.2	0	9	10	0.05	0.11	0.6	7	0.35	1
Grapes, raw 1 cup	92	58	0.6	15.8	0.3	0.1	0.1	0	9	4	0.09	0.05	0.3	13	0.27	2
Kiwi, raw 1 med.	76	46	0.8	11.3	0.3	*	*	*	13	75	0.02	0.04	0.4	20	0.31	4
Orange, raw 1 med.	140	65	1.4	16.3	0.1	0	0	0	26	80	0.12	0.06	0.4	56	0.17	1
Orange juice, from concentrate, 8 fl. oz.	249	112	1.7	26.8	0.1	0	0	0	19	97	0.20	0.05	0.5	22	0.24	2
Orange juice, fresh, 8 fl. oz.	248	111	1.7	25.8	0.5	0.1	0.1	0	50	124	0.22	0.07	0.1	27	0.50	2
Peach, raw 1 med.	87	37	0.6	9.7	0.1	0	0	0	47	6	0.02	0.04	0.9	5	0.10	0
Pear, canned light syrup, 1 cup	251	144	0.5	38.1	0.1	0	0	0	0	2	0.03	0.04	0.4	13	0.70	13
Plum, raw 1 med.	66	36	0.5	8.6	0.4	0.1	0	0	21	6	0.03	0.06	0.3	2	0.07	0
Prune juice, 8 fl. oz.	256	181	1.6	44.7	0.1	0	0	0	1	11	0.04	0.18	2	30	3.03	11
Raisins, seedless 2/3 cup	100	300	3.2	79.1	0.5	0.1	0.2	0	1	3	0.16	0.09	0.8	49	2.08	12
Strawberries, raw, 1 cup	149	45	0.9	10.5	0.6	0.3	0	0	4	85	0.03	0.10	0.3	21	0.57	2
Breads and Cereals, Rice, and Pasta																
Bran flakes, 3/4 cup 1 oz.	28	93	3.6	22.2	0.5	*	*	*	375	*	0.40	0.40	5	14	8.10	264
Macaroni, enriched, cooked 1 cup	140	159	5.2	33.7	0.7	*	*	0	*	0	0.20	0.11	1.5	11	2.25	1
Oatmeal, 1 instant packet	177	104	4.4	18.1	1.7	*	*	*	*	*	0.531	0.283	5.47	163	6.32	286
Oatmeal, w/ raisins and spice 1 pkg. prep.	158	161	4.3	31.8	1.8	*	*	*	440	*	0.51	0.36	5.5	165	6.58	225
Popcorn, air popped, 1 cup	6	23	0.8	4.6	0.3	*	0	0	*	1	*	0.01	0.1	1	0.20	0
Popcorn, w/ fat and salt, 1 cup	9	41	0.9	5.3	2	*	0.9	*	*	0	*	0.01	0.2	1	0.20	175
Pretzels, 1 oz.	28	111	2.6	22.4	1	*	*	*	*	0	0.09	0.07	1.2	7	0.55	451
Rice, white enriched, cooked, 1/2 cup	80	85	2	19	0	0	0	0	0	0	0	0	1	22	0.70	0
Rolls, dinner/pan 1 roll	28	85	2.4	14	2.1	*	*	*	*	0	0.14	0.09	1.1	33	0.83	155
Wheat bread, 1 slice	24	61	2.3	11.3	1	*	*	0	*	0	0.11	0.08	1.1	30	0.84	129
White bread, 1 slice	24	64	2	11.7	0.9	*	*	*	*	0	0.11	0.07	0.9	30	0.68	123
Whole wheat bread, 1 slice	25	61	2.4	11.4	1.1	*	*	*	*	0	0.09	0.05	1	18	0.86	159

Food Composition Table, Cont'd.

FOODS	WT (g)	KCAL	PRO (g)	CHO (g)	FAT (g)	PUFA (g)	SFA (g)	CHOL (mg)	A (RE)	C (mg)	B-1 (mg)	B-2 (mg)	NIA (mg)	Ca (mg)	Fe (mg)	Na (mg)
Milk, Yogurt, and Cheese																
Lowfat milk 2% fat, 8 fl. oz.	244	121	8.1	11.7	4.7	0.2	2.9	18	140	2	.10	.40	0.2	297	0.12	122
Skim milk, 8 fl. oz.	245	86	8.4	11.9	0.4	0	0.3	4	149	2	.09	.34	0.2	302	0.10	126
Skim (nonfat dry milk) 8 fl. oz.	245	90	8.8	12.3	0.6	0	0.4	5	149	2	.10	.43	0.2	316	0.12	130
Whole milk, 3.3% fat 8 fl. oz.	227	150	8.0	11.4	8.2	0.3	5.1	33	76	2	.09	.40	0.2	291	0.12	120
Lowfat yogurt 8 fl. oz.	227	144	11.9	16	3.5	0.1	2.3	14	36	2	.10	.49	0.3	415	0.18	159
Fruit flavor yogurt 8 fl. oz.	28	225	9.0	42.3	2.6	0.1	1.7	10	27	1	.08	.37	0.2	314	0.14	121
American, processed cheese 1 oz.	28	106	6.3	0.5	8.9	0.3	5.6	27	82	0	.01	.10	0	124	0.11	406
Cheddar cheese, 1 oz.	28	114	7.1	0.4	9.4	0.3	6.0	30	86	0	.01	.11	0	204	0.19	176
Monterey cheese, 1 oz.	28	106	6.9	0.2	8.6	*	*	*	*	0	*	.11	*	212	0.20	152
Mozzarella cheese, 1 oz.	28	79	7.8	0.9	4.9	0.1	3.1	15	54	0	.01	.10	0	207	0.07	150
Swiss cheese, 1 oz.	28	107	8.1	1	7.8	0.3	5	26	72	0	.01	.10	0	272	0.05	74
Ice cream, vanilla 10% fat 1 cup	133	269	4.8	31.7	14.3	0.5	8.9	59	133	1	.05	.33	0.1	176	0.12	116
Meat, Poultry, Fish, Dry Beans and Peas, Eggs, Nuts and Seeds																
Bacon, cured, 3 med. pieces	19	109	5.8	0.1	9.4	1.1	3.3	16	0	6	0.13	0.05	1.4	2	0.31	303
Beef, ground, baked well done 3.5 oz.	100	274	30.3	0	16	0.6	6.3	107	*	0	0.05	0.31	5.4	9	2.96	64
Beef and vegetable stew, 1 cup	245	218	15.7	15.2	10.5	*	4.9	*	*	17	0.15	0.17	4.7	29	2.90	91
Chicken, light meat w/o skin, roasted	100	173	30.9	0	4.5	1	1.3	85	9	0	0.07	0.12	12.4	15	1.06	77
Egg, 1 large fried	46	83	5.4	0.5	6.4	0.7	2.4	246	83	0	0.03	0.13	0	26	0.92	144
Peanut butter, 1 Tbsp.	16	95	4.6	2.2	8.2	2.5	1.7	0	*	*	0.01	0.01	1.9	5	0.30	75
Peanuts, dry roasted 1 oz.	28	164	6.6	6.0	13.9	4.4	1.9	0	0	0	0.12	0.03	3.8	15	0.63	228
Peanuts, oil roasted 1 oz.	28	165	7.6	5.3	14	4.4	1.9	0	0	0	0.08	0.03	4.2	24	0.54	4
Pinto beans, 1 cup boiled	171	235	14	43.9	0.9	0.3	0.2	0	0	4	0.32	0.16	0.7	82	4.47	3
Pork chops w/brown gravy 6.5 oz. entree	184	252	22.1	4.4	16.2	*	*	*	*	1	0.43	0.20	4.3	9	2.50	367
Sausage, fresh 1 link	13	48	2.6	0.1	4.1	0.5	1.4	11	*	0	0.10	0.03	0.6	4	0.16	168
Sunflower seeds, 1 oz.	28	165	5.5	6.8	14.1	9.3	1.5	0	*	*	0.03	0.07	2	20	1.1	1
Fast Foods																
Cheeseburger, 1 reg sandwich	112	299	14.8	28.3	15.1	*	*	45	*	1	0.26	0.24	3.7	136	2.33	672
French fries, 3 oz.	85	274	3.4	33.1	14.2	*	*	14	*	5	0.11	0.03	1.8	14	0.71	30
Hamburger, w/4 oz. meat	174	444	24.9	37.6	21.1	*	*	71	*	2	0.38	0.38	7.8	75	4.84	762
Pizza, cheese 1 slice	120	290	14.6	39.1	8.6	*	*	56	*	2	0.34	0.29	4.2	220	1.61	698
Pizza, pepperoni 1 slice	120	306	13	36.7	11.5	*	*	*	*	2	0.32	0.29	5.1	196	2.52	817

Food Composition Table, Cont'd.

TA 8c
TEKS 1C

FOODS	WT (g)	KCAL	PRO (g)	CHO (g)	FAT (g)	PUFA (g)	SFA (g)	CHOL (mg)	A (RE)	C (mg)	B-1 (mg)	B-2 (mg)	NIA (mg)	Ca (mg)	Fe (mg)	Na (mg)
Miscellaneous																
Cola, 12 fl. oz.	370	151	0.1	38.5	0.1	*	*	0	0	0	0	0	0	9	0.13	14
Cola, diet, 12 fl. oz.	355	2	0.2	0.3	0	0	0	0	0	0	0.02	0.08	0	12	0.11	21
Orange soda, 12 fl. oz.	372	179	0	45.8	C	*	*	0	*	0	0	0	0	15	0.26	52
Milk choc. bar, 1.65 oz.	47	254	3.8	27.1	14.5	*	*	*	*	*	0.04	0.17	0.2	94	0.52	35
Milk choc. w/ almonds	28	151	2.6	14.5	10.1	*	4.5	*	*	0	0.02	0.12	0.2	65	0.50	23
Peanut butter and choc. bar, 2 oz.	57	260	4	38	12	*	*	*	*	*	*	*	*	*	*	100
Peanut bar, 1.6 oz.	45	240	8	21	14	*	*	*	*	*	*	*	*	*	*	110
Bite-size fruit snacks, 1 pouch	26	100	1	21	2	*	*	*	*	*	*	*	*	*	*	105
Corn chips, 1 oz.	28	153	1.7	16.6	8.8	*	*	*	*	0	0.05	0.3	0	2	*	218
Potato chips, 1 oz.	28	148	1.8	14.7	10.1	5.2	2.6	0	0	12	0.04	0.01	1.2	7	0.34	133
Tortilla chips, reg. or nacho 1 oz.	28	150	2	18	8	*	*	*	*	*	*	*	*	*	*	155
Brownie w/nuts—homemade 1 brownie	20	97	1.3	10.2	6.3	*	1.4	*	*	0	0.04	0.02	0.1	8	0.40	50
Cake, devil's food—homemade 1 piece	60	227	3.4	30.4	11.3	*	*	*	*	0	0.08	0.11	0.7	68	1.03	160
Doughnuts, yeast, 1 doughnut	42	176	2.7	16	11.3	*	2.8	*	*	0	0.07	0.07	0.6	16	0.60	99
Pie, cherry—homemade, 1/8 pie	118	308	3.1	45.3	13.3	*	3.5	*	*	0	0.02	0.02	0.6	17	0.40	359
Margarine, soft 1 Tbsp.	*	100	0	0	11	4	2	0	*	*	*	*	*	*	*	95
Molasses, blackstrap, 1 Tbsp.	20	43	0	11	0	0	0	*	*	*	0.02	0.04	0.4	137	3.20	19
Salad dressing—thousand island, 1 Tbsp.	16	58	0.1	2.4	5.6	3.1	0.9	*	50	*	*	*	*	2	0.10	109
Sugar, white granulated, 1 tsp.	4	15	0	4	0	0	0	*	*	0	0	0	0	0	0	0

Sources: USDA Food Handbooks

*Denotes "information not available." Do not assume that the value would be zero.

The nutrient data provided in the Food Composition Table should be seen only as an approximation and used strictly as a guide in learning activities.

- The many factors which affect the amounts of nutrients in foods include:
- animal diets
 - mineral content of soil
 - types of fertilizer used on samples
 - season of the year
 - method of storage
 - length of storage

- processing methods
- methods of analysis
- moisture content of analyzed samples
- method of food preparation

Therefore, many different nutrient values will be reported in a variety of reliable resources.

LEGEND

WT=weight
KCAL=calories
PRO=protein
CHO=carbohydrate
FAT=fat
PUFA=polyunsaturated fatty acids
SFA=saturated fatty acids
CHOL=cholesterol
A(RE)=vitamin A (retinol equivalent)
C=vitamin C (ascorbic acid)
B-1=thiamin
B-2=riboflavin
NIA=niacin
Ca=calcium
Fe=iron
Na=sodium

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Comparing the Nutritive Value of Foods

Directions: Using a food composition table, complete the following chart by filling in the nutrient amounts for the foods listed. Then, answer the questions below.

Food	Protein (g)	Iron (mg)	Calcium (mg)	Vitamin A (RE)	Vitamin C (mg)	Fat (g)
Carrots 1/2 c.						
Ground beef patty, 3.5 oz						
Cola, 12 fl. oz.						
Tortilla chips, 1 oz.						
Fortified oatmeal, quick, 1/3 c.						
Chicken, roasted w/o skin, 1 pc						
Orange Juice, 8 fl. oz.						
Milk, 8 fl. oz.						

- Using the figures from the chart above, name the nutrient-rich food sources for each of the following nutrients (based on one serving):
 - Protein _____
 - Calcium _____
 - Iron _____
 - Vitamin A _____
 - Vitamin C _____
 - Fat _____
- Some foods may be rich sources of more than one nutrient. List the food(s) from the chart above that are rich sources of more than one nutrient. List the nutrients next to each food.
- List the foods that are NOT rich sources of any of the nutrients.
- If your diet consisted of foods that contained little or no nutrients, what would be the long-term effects on your health?

Comparing the Nutritive Value of Foods

Answer Key

Food	Protein (g)	Iron (mg)	Calcium (mg)	Vitamin A (RE)	Vitamin C (mg)	Fat (g)
Carrots 1/2 c.	0.5	0.47	19	1006	2	0.1
Ground beef patty, 3.5 oz	30.3	2.96	9	0	0	16.0
Cola, 12 fl. oz.	0.1	0.13	9	0	0	0.1
Tortilla chips, 1 oz.	2	0	0	0	0	8
Fortified oatmeal, quick, 1/3 c.	4.4	6.32	163	453	0	1.7
Chicken, roasted w/o skin, 1 pc	30.9	1.06	15	9	0	4.5
Orange Juice, 8 fl. oz.	1.7	0.24	22	19	97	0.1
Milk, 8 fl. oz.	8.1	.12	297	140	2	4.7

- chicken, ground beef
 - milk
 - oatmeal
 - carrots, oatmeal
 - orange juice
 - ground beef
- oatmeal — iron, calcium, vitamin A
milk — calcium, protein
- cola, tortilla chips
- Answers will vary.

Can Nutritious Foods Be Found In a Vending Machine?

TA 10
TEKS 1C

ACTIVITY ONE

By using foods from the vending machine, search out the most unhealthy food product you can find. Look for foods outrageously high in fat, sodium, and/or calories. There will be a "reward" for the group that finds the most unhealthy food.

Food your group found:

Vitamins and Minerals:

(Attach the food package/label here)

vitamin A:

vitamin C:

calcium:

iron:

other:

Grams of Fat:

Milligrams of Sodium:

Calories:

ACTIVITY TWO

Search for the healthiest snack you can find, again using foods from the vending machines. Look for foods that have more than 10 percent of a variety of vitamins, no more than five grams of fat, and less than one hundred milligrams of sodium per serving.

Food your group found:

Vitamins and Minerals:

(Attach the food package/label here)

vitamin A:

vitamin C:

calcium:

iron:

other:

Grams of Fat:

Milligrams of Sodium:

Calories:

201

Effects of Nutritional Intake — Case Studies

Case Study 1

When Joe was a child, his parents were strict vegetarians. They served many vegetables and soy protein products to him, which he did not like very much. He used to complain to his parents that he wanted to eat the same food his friends ate, like hamburgers and pepperoni pizza. Finally, when he was about ten years old, they decided to change the family's diet and give him freedom to choose what he wanted to eat at mealtime. Due to the things his parents have said about nutrition, Joe still thinks nutrition means being forced to eat foods he does not like just because somebody says it is good for you. He refuses to eat most vegetables, hates anything with soy protein in it, and avoids any food which is advertised as nutritious, such as vitamin-enriched cereals.

Case Study 2

Mary eats many fried foods. Everyday, she has two doughnuts for breakfast, potato chips for a snack at midmorning, french fries with a hamburger or fried chicken nuggets for lunch, and an evening meal which often consists of fried fish, meat, or poultry and deep fried vegetables. Mary is active in several sports at school and is at her "ideal weight" according to the weight charts for teenagers. Her doctor suggested she stop eating fried foods, but she does not think her eating habits are so bad. She feels healthy, so she has decided to continue eating the kinds of foods she likes best—fried foods.

Case Study 3

Chi Yin is the best tennis player in his region of the state. He plays on the high school tennis team and wins most of the amateur tournaments he enters. Being a good player requires practice time, and with school and his part-time job, he usually cannot get home for regular meals. In fact, food does not matter to him much, and he frequently eats the same things for lunch and supper. He usually orders something at a fast food restaurant at noon and after practice on his way to his evening job. His parents are concerned about his eating habits, but Chi does not think nutrition is very important, just as long as he is not hungry when he is practicing.

Case Study 4

Diana has been wanting to lose thirty pounds for a long time now, so she is eager to try any new weight-loss diet she hears about. Her mother usually diets with her, and they shop for the foods and prepare them together. They often get tired of the diet after a couple of weeks. The last diet that they went on was one that Diana's best friend had read about in a magazine. It consisted of one week of eating only fruit, a second week of eating only lean meat, followed by three days of fasting. They gave up the diet after only three days. Diana and her mother do not know much about nutrition, so they are not very good at making decisions about whether a diet is healthy for them. The next weight-loss diet they plan to try is called the "Eat Thin, Be Thin" diet. Three of Diana's friends are on the diet, and they all say they have lost several pounds in the first week of the diet.

Calculation of Energy Needs

1. Define the word *sedentary*.

7. Figure sedentary energy needs per minute. Do this by dividing your daily sedentary calorie needs (answer to 2) by 24 (hours).

$$\frac{\text{Answer to 2}}{\div 24} = \text{Energy Needs per Hour}$$

2. Calculate roughly how many calories you should consume in one day if you are sedentary by multiplying your present weight by 10.

$$\frac{\text{Present Weight}}{\times 10} = \text{Sedentary Calorie Needs}$$

Then divide the number of calories needed for sedentary activity in one hour by 60 (minutes). This will yield energy needs per minute.

$$\frac{\text{Energy Needs per Hour}}{\div 60} = \text{Energy Needs per Minute}$$

3. Calculate your calorie needs if you are lightly active. An example of a lightly active person is a student who is involved in a walking program. Multiply your present weight by 13.

$$\frac{\text{Present Weight}}{\times 13} = \text{Calories Needed for Light Activity}$$

This is a rough estimate. Activity in which most people engage during a twenty-four hour period, such as walking, sitting, and sleeping, uses varying amounts of food energy.

4. Calculate your calorie needs if you are heavily active. Daily exercise programs are considered heavy activity. Multiply your present weight by 20.

$$\frac{\text{Present Weight}}{\times 20} = \text{Calories Needed for Heavy Activity}$$

8. Figure how many minutes it would take to use the energy in the food if you are sedentary. Divide the number of calories contained in your snack by the number of calories you would burn in one minute if you were sedentary.

$$\frac{\text{Answer to 6}}{\div \text{Energy Needs per Minute}} = \text{Minutes Needed to Use Calories}$$

5. The method used decreases energy needs by 100 calories for every ten years over the age of thirty. Why might energy needs decrease over time?

9. Calculate minutes needed for light activity.

6. Examine a favorite snack food from the display. Record the number of calories.

of Calories in Snack

10. Calculate minutes needed for heavy activity.

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KEEP MOVING!

DIRECTIONS:

- The **Calorie Use Chart** below lists several activities and the approximate calories spent per hour by a 100, 125, 150, 175 and 200 lb. person doing a certain activity.
- Select five of the activities.
- On notebook paper, copy the formula below and determine how many calories individuals weighing 100, 125, 150, 175, and 200 pounds would burn during these exercise activities.
- Remember these are estimated figures because everyone has a different metabolic rate.

DETERMINING CALORIE USE

EXAMPLE: Activity: Running (100-lb. person at 10 mph)
 Number of calories per hour (850)
 X Number of hours (1/2)
 (425) calories used

Calorie Use Chart					
ACTIVITY	Calories used per hour for a person weighing:				
	100 lb.	125 lb.	150 lb.	175 lb.	200 lb.
Bicycling, 6 mph	160	200	240	280	320
Bicycling, 12 mph	270	340	410	470	540
Jogging, 5 1/2 mph	440	550	660	770	880
Jogging, 7 mph	610	765	920	1074	1220
Jumping rope	500	625	750	875	1000
Running in place	430	540	650	759	860
Running, 10 mph	850	1065	1280	1494	1700
Swimming, 25 yds./min.	185	230	275	321	370
Swimming, 50 yds./min.	325	413	500	584	650
Tennis singles	265	333	400	467	530
Walking, 2 mph	160	200	240	280	320
Walking, 3 mph	210	265	320	374	420
Walking, 4 1/2 mph	295	368	440	514	590

Exercise for Health!

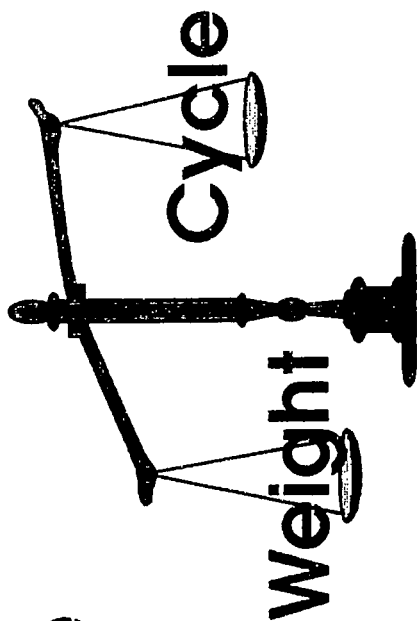
Regular exercise:

- raises metabolic rate
- uses more calories than at rest
- increases the percentage of muscle
(muscle cells use more energy than fat cells)
- reduces stress
- reduces risk of certain diseases
- helps maintain weight
- increases energy level

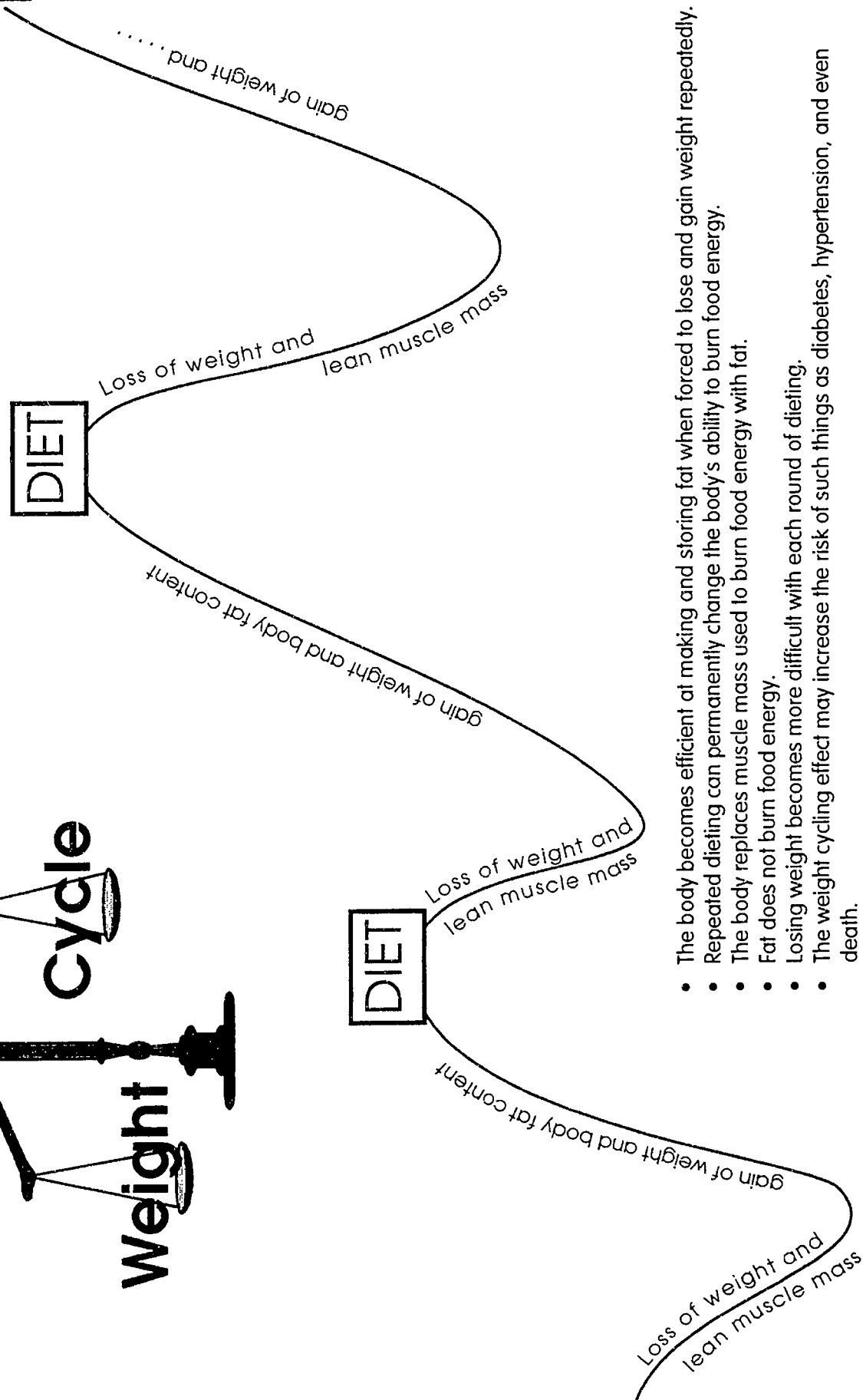


- _____
- _____
- _____

The



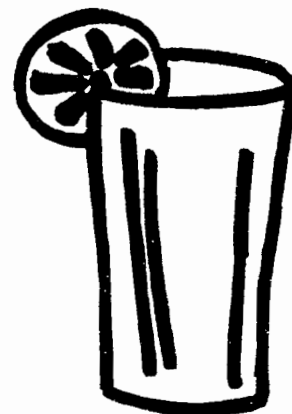
TA 15
TEKS 1E



- The body becomes efficient at making and storing fat when forced to lose and gain weight repeatedly.
- Repeated dieting can permanently change the body's ability to burn food energy.
- The body replaces muscle mass used to burn food energy with fat.
- Fat does not burn food energy.
- Losing weight becomes more difficult with each round of dieting.
- The weight cycling effect may increase the risk of such things as diabetes, hypertension, and even death.
- Maintaining a stable weight is less harmful to health than repeated dieting.

Tips to Healthy Weight Control

- Each morning when you wake up, tell yourself that you are a terrific person.
- Drink six to eight glasses of water a day. For best results, this should be water, not coffee, tea, or soft drinks.
- Eat a wide variety of foods. Do not label foods as bad or good.
- Concentrate on eating a nutritionally balanced diet, not on weight.
- Exercise four to five times a week to lose weight and three to four times a week to maintain weight.
- Eat at the table with family and friends.
- Do not eat while doing other activities such as playing cards or watching television.
- Learn to prepare foods by broiling, boiling, or baking. Limit fried foods.
- Limit lunch meats and hotdogs because they are usually high in fat.
- Increase your fiber intake by eating more fresh fruits and vegetables.
- Try having one non-meat day a week; cheese pizza and other low-fat dairy products could be substituted.
- Do not link your weight loss to a special event such as the prom or vacation.
- Plan your menus for the week, make a grocery list, and buy your groceries from this list.
- Weigh yourself only once a week.
- Do not skip meals.
- Allow a reasonable amount of time to achieve your desired weight loss.



Nutrition Research Assignment

- 🔍 Research and read information from reliable nutrition sources, including print media and the Internet on topics related to the prevention, treatment, and management of diet-related diseases, medical conditions, and eating disorders. Use the computer search in the library to locate articles on the topic you choose.

Suggested topics include the following:

- Adolescent Nutrition
- Anorexia
- Bulimia
- Diabetes
- Diet and Heart Disease
- Diet and Hypertension
- Digestive Diseases
- Fad Diets
- Family Nutrition and Meal Planning
- Food Allergies
- Importance of a Fiber-rich Diet
- Liquid Diets
- Low-calorie Cooking
- Low-fat Diets
- Nutrition and Cancer
- Nutritional Aspects of Pregnancy
- Osteoporosis
- Weight Control

Check with your teacher if you have another topic that is not listed.

Written Assignment: After reading the articles, write a two page summary of the information learned from the two articles. Use computer word processing programs if available. Include the bibliographical data on a separate sheet of paper that you attach to your summary.

Mr. American Diet on Trial

Characters: **Narrator**
 Mr. American Diet (Mr. A.D.)
 Bailiff
 Prosecuting Attorney (P.A.)

Defense Attorney (D.A.)
Judge
Jury Foreman
Jury

Setting: (Courtroom in Anytown, U.S.A.) Mr. American Diet is on the witness stand, about to be sworn in by the bailiff. The judge is seated next to Mr. American Diet, and the Defense Attorney and the Prosecuting Attorney are each seated at tables, facing the Judge.

Narrator: As we begin our play, Mr. American Diet seems a bit uncomfortable at the prospect of being held responsible for the death of thousands of heart attack and stroke victims each year. These strokes and heart attacks have been brought on by an excess of cholesterol in the diet. He is very defensive and angry. The prosecuting attorney is equally angered by the death and illnesses which he believes have resulted from the ingestion of too much cholesterol in the diet of the American people. The defense attorney seems smug and a bit unconcerned. The jury is busily taking notes, in hopes of rendering a fair verdict at the end of the trial. Let's listen in as the bailiff begins to swear in Mr. American Diet.

Bailiff: *(standing in front of Mr. American Diet, whose right hand is held up)*

Do you swear to tell the truth, the whole truth, and nothing but the truth, so help you God?

Mr. A.D.: I do.

P.A.: State your name in full for the record.

Mr. A.D.: My name is Mr. American Diet.

P.A.: You are being accused of contributing to the deaths of thousands of Americans each year. Coroner's reports indicate that thousands die of cardiovascular disease brought on by atherosclerosis.

Mr. A.D.: (exasperated)

Hold on! Hold on! Stop all this medical mumbo-jumbo. Athero-what? Cardio-what disease?

P.A.: *Cardiovascular disease* is a term that covers all the diseases of the heart and blood vessels. *Atherosclerosis* is hardening of the arteries, characterized by a thickening of the artery walls with plaques. Please allow me to define the word *plaques* before you ask what it is. **Plaques** are mounds of lipid matter that accumulate on the inner walls of the arteries.

Mr. A.D.: So what! I don't know what all this has to do with me!

P.A.: I'll tell you what it has to do with you. Are you familiar with something called cholesterol?

Mr. A.D.: Yes, I am.

P.A.: Please describe, in your own words, what this is, and what the body does with it.

D.A.: Objection! I see no relevance to this line of questioning.

P.A.: *(to Judge)* If it pleases the court, Your Honor, I intend to prove that Mr. American Diet intentionally subjects his victims to a form of cholesterol that leads to heart attack and stroke.

Judge: You may continue. Mr. American Diet, please answer the question.

Mr. A.D.: *(agitated)*

Alright! There is something called *cholesterol* found among the fats in the bloodstream. **Cholesterol** is an odorless, soft, fat-like substance found in every cell in the body. It is used to form cell membranes and certain types of hormones. It assists the body in: manufacturing vitamin D. It also plays a role in digestion. People obtain cholesterol in two ways. It is found in foods that come from animals, and also the body manufactures it, primarily in the liver.

Mr. American Diet on Trial, Cont'd.

- P.A.:** Well, well, well, Mr. Diet, you sound fairly informed for someone who protests about medical mumbo-jumbo.
- Mr. A.D.:** Let's just say that I have been accused of causing cardiovascular disease before.
- P.A.:** *(smugly)* Yes, I see, yet you still insist that you are innocent of any wrong doing concerning the deaths of these people. Let's back up a minute. Cholesterol and other fats can't dissolve in the blood. Lipoproteins then transport this cholesterol. There are several types of lipoproteins. Two types of lipoproteins are LDL and HDL.
- Mr. A.D.:** Yes, low density lipoproteins and high density lipoproteins.
- P.A.:** Please describe to the jury everything you know about these lipoproteins.
- Mr. A.D.:** If you insist! Some say the HDL is the "good guy" because it carries cholesterol to the liver where it is processed into harmless substances. However, the LDL keeps the cholesterol in the blood-stream where it is deposited.
- P.A.:** Deposited where, Mr. American Diet?
- Mr. A.D.:** *(whispering)* On the artery walls.
- P.A.:** Louder, Mr. American Diet.
- D.A.:** Objection! Counsel is badgering the witness.
- Judge:** Overruled. Please answer the question Mr. American Diet.
- Mr. A.D.:** *(annoyed, but louder)* I said, on the artery walls.
- P.A.:** Please state what this leads to.
- Mr. A.D.:** *(aggravated)* This leads to the development of atherosclerosis, which is a type of hardening of the arteries.
- P.A.:** And what does atherosclerosis lead to?
- Mr. A.D.:** *(highly provoked)* Atherosclerosis leads to the closing or blocking of the arteries that supply blood to the heart and brain. Obstruction or blockage in the arteries can cause heart attacks and strokes.
- P.A.:** Are you aware of the risk factors that relate to atherosclerosis?
- Mr. A.D.:** I am, and that's why I don't think you can blame these deaths on me.
- P.A.:** I see. Please tell the jury what the risk factors for developing atherosclerosis are.
- Mr. A.D.:** Smoking, gender—males are more prone to heart disease, heredity—persons with family history of heart disease, high blood pressure, lack of exercise, stress, and personality characteristics—persons who are competitive, tense, and resist fatigue.
- P.A.:** Please don't leave out the other two risk factors, Mr. American Diet. What are they?
- D.A.:** *(loudly)* Objection!
- Judge:** Overruled! The witness will please answer the question.
- Mr. A.D.:** The other two factors are obesity and high blood cholesterol levels. Levels that are over 200 milligrams per 100 milliliters of blood are considered high.
- P.A.:** Please state for the court the dietary goals that can lower blood cholesterol levels.

Mr. American Diet on Trial, Cont'd.

Mr. A.D.: (*sarcastically*) Do you have a pen and pad? There are seven of them.

Judge: Just answer the question.

Mr. A.D.: Yes, Your Honor.

1. Reduce total fat intake to 30 percent of total calories.
2. Include more whole grains in the daily diet.
3. Eat fish more often.
4. Increase consumption of fiber-rich fruits and vegetables.
5. Add the many varieties of legumes to the daily diet more often, such as dried beans and peas and soybeans.
6. Include nonfat or low-fat milk and milk products every day.
7. Reduce the cholesterol-rich foods in the diet, especially organ meats, egg yolks, shellfish, and fatty red meats.

P.A.: Very good, Mr. American Diet! Please tell the jury why you have not tried to meet these goals.

D.A.: Objection! Your Honor! Again, I question the relevance of this line of questioning!

P.A.: (*haughtily*) Your Honor, I am trying to establish that Mr. American Diet is well aware of the risks involved in eating foods laden with cholesterol, and that for some unknown reason he chooses to continue to promote these potentially lethal foods that cause the death of thousands of people each and every year from heart attack and stroke.

Judge: The witness will please answer the question.

Mr. A.D.: The reason I don't try to meet these goals is that, I don't follow them because.....I mean to say that I don't..... well Your Honor, I am not exactly sure why I don't.

P.A.: (*to the Judge*) I have no further questions, Your Honor. He is your witness, defense attorney.

D.A.: I have no questions for this witness.

Judge: Are there any more witnesses?

P.A.: No, Your Honor.

D.A.: I have none, Your Honor.

Judge: (*to jury*) It is your job, members of the jury, to determine whether the witness, Mr. American Diet is indeed guilty of causing the deaths of thousands of Americans each year by heart attack and stroke. Please render the verdict on the basis of the information given in the trial. If you find Mr. American Diet to be guilty of these deaths, please be prepared to offer to me suggestions for how Mr. American Diet can help reduce the risk of others who may fall victim to cardiovascular disease. Please feel free to look at the court record of the trial and at your notes.

Jury Foreman: (*to jury*) We need to come up with a verdict. Please discuss the following questions:

1. **What role does cholesterol, specifically LDL, play in causing the deaths of thousands each year by heart attack and stroke?**
2. **What are the risk factors for developing atherosclerosis?**
3. **Is Mr. American Diet guilty or innocent in the deaths of thousands by cardiovascular disease?**
4. **In what ways can Mr. American Diet reform in order to reduce the risk of cardiovascular disease to the American people?**

Thank you members of the jury. We will inform the court of our decision.

Case Studies on Stress and Diet

1. Jim is a high school senior. He is editor of the yearbook and has a part-time job (15-20 hours per week) at the mall. On most school days, Jim works in the journalism office before school and during lunch so he can go straight to work right after school. As a result, Jim eats every meal “on the go” and rarely eats a meal at home with his family. He depends on donuts, cookies, and other high fat foods from the quick stop store and fast food restaurants for his meals.
2. Chin Lee is a thirty-eight-year-old lawyer working for a private firm that handles criminal cases. She considers her work very stressful and works at least twelve hours each day including Saturdays. She most often eats fast food, such as fried chicken, pizza, hamburgers, and french fries. Her father, who is sixty-one, has coronary heart disease. Chin Lee recently found out that she has hypertension.
3. Adolf is a twenty-six year old owner of a florist shop. He works six days a week, twelve hours each day. Adolf orders take-out food for lunch and dinner. His diet is not balanced, and he has just been informed that an uncle has had a stroke.
4. Cindy is a forty-year-old full-time homemaker with three boys, ages eight, twelve, and fifteen. Cindy’s mother lives nearby and is recovering from a broken hip. All of the boys are involved in school, church, and sports activities. Cindy is president of the city-wide PTA and volunteers at the local hospital two days a week. She rarely eats breakfast because she is busy getting her family off to school and work. She eats lunch on the run often grabbing a soft drink and some chips or a candy bar to curb her hunger until dinner time. She does try to prepare a hot meal for her family, but recently, this has been difficult due to taking the boys to all of their activities, managing her PTA responsibilities, and taking care of her mother.



A Pattern for Daily Food Choices

Food Groups	Suggested Daily Servings	What Equals a Serving?
Vegetables <ul style="list-style-type: none"> • Dark green leafy • Deep yellow • Starchy • Other vegetables 	3 - 5 servings from entire group (include all types regularly; use dark green leafy vegetables and deep yellow vegetables several times a week.)	<ul style="list-style-type: none"> ◆ 1/2 cup of cooked vegetables ◆ 1/2 cup of chopped raw vegetables ◆ 1 cup of leafy raw vegetables, such as lettuce or spinach ◆ 3/4 cups of vegetable juice
Fruits <ul style="list-style-type: none"> • Citrus, melon, berries • Other fruits 	2 - 4 servings from entire group	<ul style="list-style-type: none"> ◆ a whole fruit, such as a medium apple, banana, or orange ◆ a grapefruit half ◆ a melon wedge ◆ 3/4 cup of juice ◆ 1/2 cup of berries ◆ 1/2 cup cooked or canned fruit ◆ 1/4 cup dried fruit
Breads, Cereals, Rice, and Pasta <ul style="list-style-type: none"> • Whole-grain • Enriched 	6 - 11 servings from entire group (include several servings of whole-grain products daily.)	<ul style="list-style-type: none"> ◆ 1 slice of bread ◆ 1/2 hamburger bun, English muffin, or bagel ◆ a small roll, biscuit, or muffin ◆ 3 to 4 small or 2 large crackers ◆ 1/2 cup cooked cereal, rice, or pasta ◆ 1 ounce of ready-to-eat breakfast cereal ◆ 1 tortilla or pancake
Milk, Yogurt, and Cheese	2 servings for adults 3 servings for children 4 servings for ages 11-24 (3 servings for women who are pregnant or breast-feeding; 4 servings for teens who are pregnant or breast-feeding)	<ul style="list-style-type: none"> ◆ 1 cup of milk ◆ 8 ounces yogurt ◆ 1 1/2 ounces of natural cheese ◆ 2 ounces processed cheese
Meat, Poultry, Fish, Dry Beans and Peas, Eggs, Nuts, and Seeds	2 - 3 servings from entire group (include dry beans and peas often.)	<ul style="list-style-type: none"> ◆ 2-3 ounces equal one serving of cooked lean meat, poultry, or fish. Count 1 egg, 1/2 cup cooked dried beans, or 2 T. peanut butter as 1 ounce of meat.

FOOD AND NUTRITION BOARD, NATIONAL ACADEMY OF SCIENCES-NATIONAL RESEARCH COUNCIL
RECOMMENDED DIETARY ALLOWANCES,^a Revised 1989 (Abridged)
Designed for the maintenance of good nutrition of practically all healthy people in the United States

Category	Age (years) or Condition	Weight ^b (kg)	Height ^b (cm)	Height ^b (in)	Protein (g)	Vitamin A (µg RE) ^c	Vitamin E (mg α-TE) ^d	Vitamin K (µg)	Vitamin C (mg)	Iron (mg)	Zinc (mg)	Iodine (µg)	Selenium (µg)
Infants	0-0.5	6	13	60	24	13	375	5	30	6	5	40	10
	0.5-1.0	9	20	71	28	14	4	10	35	10	5	50	15
Children	1-3	13	29	90	35	16	400	15	40	10	10	70	20
	4-6	20	44	112	44	24	500	20	45	10	10	90	20
	7-10	28	62	132	52	28	700	30	45	10	10	120	30
Males	11-14	45	99	157	62	45	1,000	45	50	12	15	150	40
	15-18	66	145	176	69	59	1,000	65	60	12	15	150	50
	19-24	72	160	177	70	58	1,000	70	60	10	15	150	70
	25-50	79	174	176	70	63	1,000	80	60	10	15	150	70
	51+	77	170	173	68	63	1,000	80	60	10	15	150	70
Females	11-14	46	101	157	62	46	800	45	50	15	12	150	45
	15-18	55	120	163	64	44	800	55	60	15	12	150	50
	19-24	58	128	164	65	46	800	60	60	15	12	150	55
	25-50	63	138	163	64	50	800	65	60	15	12	150	55
	51+	65	143	160	63	50	800	65	60	10	12	150	55
Pregnant						60	800	10	70	30	15	175	65
Lactating	1st 6 months					65	1,300	65	95	15	19	200	75
	2nd 6 months					62	1,200	65	90	15	16	200	75

NOTE: This table does not include nutrients for which Dietary Reference Intakes have recently been established (see *Dietary Reference Intakes for Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride* [1997] and *Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B₆, Folate, Vitamin B₁₂, Pantothenic Acid, Biotin, and Choline* [1998]).

^a The allowances, expressed as average daily intakes over time, are intended to provide for individual variations among most normal persons as they live in the United States under usual environmental stresses. Diets should be based on a variety of common foods in order to provide other nutrients for which human requirements have been less well defined.

^b Weights and heights of Reference Adults are actual medians for the U.S. population of the designated age, as reported by NHANES II. The median weights and heights of those under 19 years of age were taken from Hamill et al. (1979). The use of these figures does not imply that the height-to-weight ratios are ideal.

^c Retinol equivalents. 1 retinol equivalent = 1 µg retinol or 6 µg β-carotene

^d α-Tocopherol equivalents. 1 mg d-α tocopherol = 1 α-TE.

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FOOD AND NUTRITION BOARD, INSTITUTE OF MEDICINE-NATIONAL ACADEMY OF SCIENCES
DIETARY REFERENCE INTAKES: RECOMMENDED INTAKES FOR INDIVIDUALS

Life-Stage Group	Calcium (mg/d)	Phosphorus (mg/d)	Magnesium (mg/d)	Vitamin D (μg/d) ^{a,b}	Fluoride (mg/d)	Thiamin (mg/d)	Riboflavin (mg/d)	Niacin (mg/d) ^c	Vitamin B ₆ (mg/d)	Folate (μg/d) ^d	Vitamin B ₁₂ (μg/d)	Pantothenic Acid (mg/d)	Biotin (μg/d)	Choline ^e (mg/d)
Infants														
0-6 mo	210*	100*	30*	5*	0.01*	0.2*	0.3*	2*	0.1*	65*	0.4*	1.7*	5*	125*
7-12 mo	270*	275*	75*	5*	0.5*	0.3*	0.4*	4*	0.3*	80*	0.5*	1.8*	6*	150*
Children														
1-3 yr	500*	460	80	5*	0.7*	0.5	0.5	6	0.5	150	0.9	2*	8*	200*
4-8 yr	800*	500	130	5*	1*	0.6	0.6	8	0.6	200	1.2	3*	12*	250*
Males														
9-13 yr	1,300*	1,250	240	5*	2*	0.9	0.9	12	1.0	300	1.8	4*	20*	375*
14-18 yr	1,300*	1,250	410	5*	3*	1.2	1.3	16	1.3	400	2.4	5*	25*	550*
19-30 yr	1,000*	700	400	5*	4*	1.2	1.3	16	1.3	400	2.4	5*	30*	550*
31-50 yr	1,000*	700	420	5*	4*	1.2	1.3	16	1.3	400	2.4	5*	30*	550*
51-70 yr	1,200*	700	420	10*	4*	1.2	1.3	16	1.7	400	2.4 ^f	5*	30*	550*
> 70 yr	1,200*	700	420	15*	4*	1.2	1.3	16	1.7	400	2.4 ^f	5*	30*	550*
Females														
9-13 yr	1,300*	1,250	240	5*	2*	0.9	0.9	12	1.0	300	1.8	4*	20*	375*
14-18 yr	1,300*	1,250	360	5*	3*	1.0	1.0	14	1.2	400 ^g	2.4	5*	25*	400*
19-30 yr	1,000*	700	310	5*	3*	1.1	1.1	14	1.3	400 ^g	2.4	5*	30*	425*
31-50 yr	1,000*	700	320	5*	3*	1.1	1.1	14	1.3	400 ^g	2.4	5*	30*	425*
51-70 yr	1,200*	700	320	10*	3*	1.1	1.1	14	1.5	400	2.4 ^f	5*	30*	425*
> 70 yr	1,200*	700	320	15*	3*	1.1	1.1	14	1.5	400	2.4 ^f	5*	30*	425*
Pregnancy														
≤ 18 yr	1,300*	1,250	400	5*	3*	1.4	1.4	18	1.9	600 ^h	2.6	6*	30*	450*
19-30 yr	1,000*	700	350	5*	3*	1.4	1.4	18	1.9	600 ^h	2.6	6*	30*	450*
31-50 yr	1,000*	700	360	5*	3*	1.4	1.4	18	1.9	600 ^h	2.6	6*	30*	450*
Lactation														
≤ 18 yr	1,300*	1,250	360	5*	3*	1.5	1.6	17	2.0	500	2.8	7*	35*	550*
19-30 yr	1,000*	700	310	5*	3*	1.5	1.6	17	2.0	500	2.8	7*	35*	550*
31-50 yr	1,000*	700	320	5*	3*	1.5	1.6	17	2.0	500	2.8	7*	35*	550*

NOTE. This table presents Recommended Dietary Allowances (RDAs) in bold type and Adequate Intakes (AIs) in ordinary type followed by an asterisk (*). RDAs and AIs may both be used as goals for individual intake. RDAs are set to meet the needs of almost all (97 to 98 percent) individuals in a group. For healthy breastfed infants, the AI is the mean intake. The AI for other life-stage and gender groups is believed to cover needs of all individuals in the group, but lack of data or uncertainty in the data prevent being able to specify with confidence the percentage of individuals covered by this intake.

^a As cholecalciferol. 1 μg cholecalciferol = 40 IU vitamin D.

^b In the absence of adequate exposure to sunlight.

^c As niacin equivalents (NE). 1 mg of niacin = 60 mg of tryptophan, 0-6 months = preformed niacin (not NE).

^d As dietary folate equivalents (DFE). 1 DFE = 1 μg food folate = 0.6 μg of folic acid (from fortified food or supplement) consumed with food = 0.5 μg of synthetic (supplemental) folic acid taken on an empty stomach.

^e Although AIs have been set for choline, there are few data to assess whether a dietary supply of choline is needed at all stages of the life cycle, and it may be that the choline requirement can be met by endogenous synthesis at some of these stages.

^f Because 10 to 30 percent of older people may malabsorb food-bound B₁₂, it is advisable for those older than 50 years to meet their RDA mainly by consuming foods fortified with B₁₂ or a supplement containing B₁₂.



^g In view of evidence linking folate intake with neural tube defects in the fetus, it is recommended that all women capable of becoming pregnant consume 400 μg of synthetic folic acid from fortified foods and/or supplements in addition to intake of food folate from a varied diet.

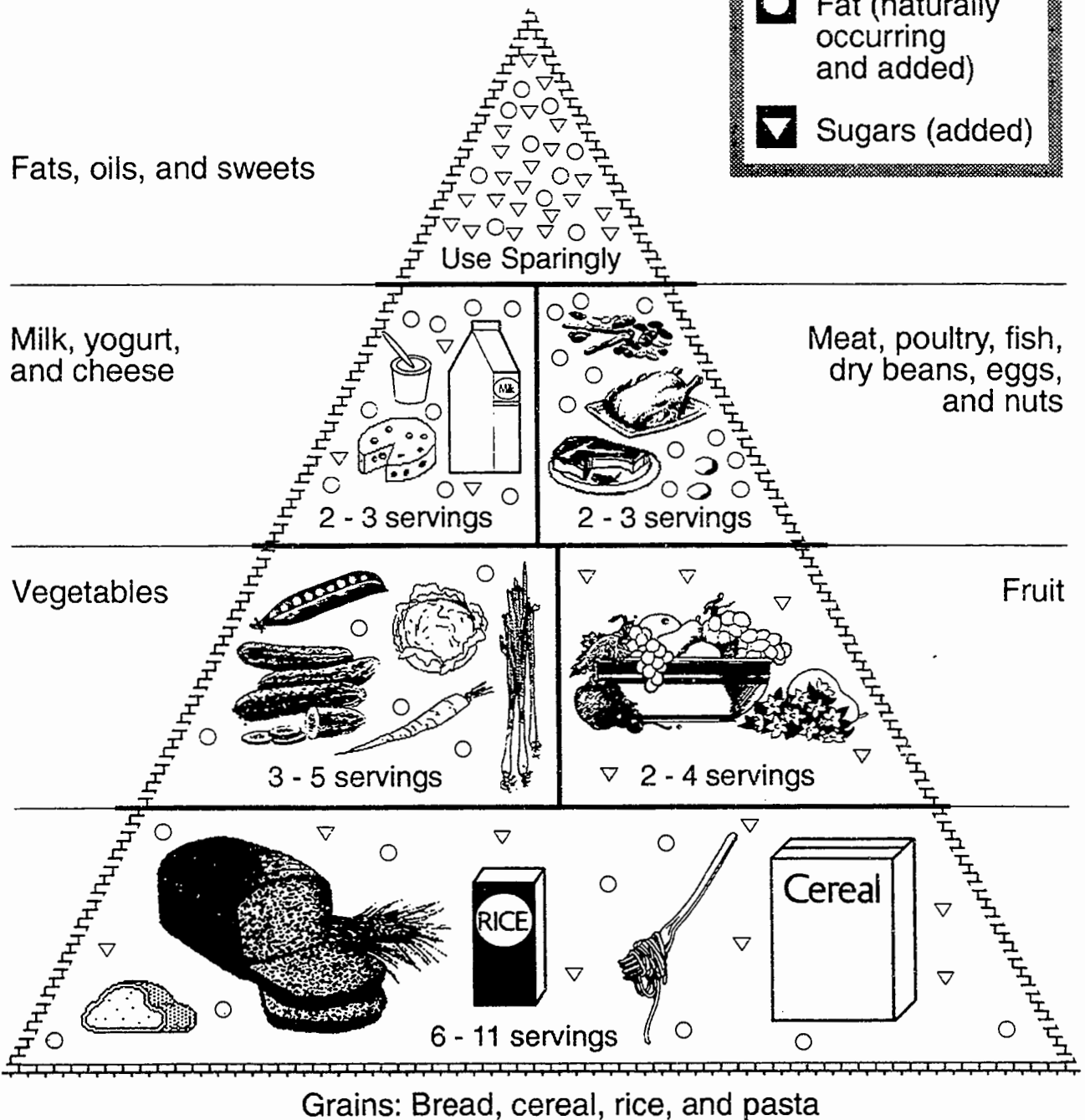
^h It is assumed that women will continue consuming 400 μg of folic acid until their pregnancy is confirmed and they enter prenatal care, which ordinarily occurs after the end of the preconceptional period—the critical time for formation of the neural tube.

Food Guide Pyramid

A guide to daily
food choices

Key

-  Fat (naturally occurring and added)
-  Sugars (added)



Adapted from. "The Food Guide Pyramid." Home and Garden Bulletin No. 252. United States Department of Agriculture Human Nutrition Information Service.

Nutrition and Your Health: DIETARY GUIDELINES FOR AMERICANS

- 1** Eat a variety of foods.
People need more than forty different nutrients for good health. Essential nutrients include vitamins, minerals, amino acids from protein, certain fatty acids from fat, and sources of calories (protein, carbohydrates, and fat). These nutrients should come from a variety of foods, not from a few highly fortified foods or supplements. Get the nutrients needed by choosing different foods you enjoy eating from the five major food groups. These groups are vegetables, fruits, grain products, milk and milk products, and meats and meat alternatives.
- 2** Balance the food you eat with physical activity — maintain or improve your weight
Being too fat or too thin increases chances of developing health problems. Being too fat is common in the United States. It is linked with high blood pressure, heart disease, stroke, the most common type of diabetes, certain cancers, and other types of illness.
- 3** Choose a diet with plenty of grain products, vegetables, and fruits.
Vegetables, fruits, and grain products are important parts of a varied diet. They are emphasized in this guideline especially for their complex carbohydrates, dietary fiber, and other food components linked to good health.
- 4** Choose a diet low in fat, saturated fat, and cholesterol.
Higher levels of saturated fat and cholesterol in the diet are linked to increased risk for heart disease. A diet low in fat makes it easier to include the variety of foods you need for nutrients without exceeding your calorie needs because fat contains over twice the calories of an equal amount of carbohydrates or protein.
- 5** Choose a diet moderate in sugars.
Sugars and many foods that contain them in large amounts supply calories but are limited in nutrients. Thus, they should be used in moderation by most healthy people and sparingly by people with low-calorie needs. The more often these foods—even small amounts—are eaten, the greater the risk for tooth decay.
- 6** Choose a diet moderate in salt and sodium.
Table salt contains sodium and chloride—both are essential in the diet. However, most Americans eat more salt and sodium than they need. In the United States, about one in three adults has high blood pressure. If these people restrict their salt and sodium intake, usually their blood pressure will fall.
- 7** Avoid alcoholic beverages.
Drinking alcoholic beverages is illegal in Texas for people under age twenty-one. Heavy drinking of alcoholic beverages is related to malnutrition, liver disease, and some forms of cancer. Drinking alcoholic beverages during pregnancy can damage the developing fetus. People who drink alcoholic beverages before driving increase their risk of car accidents.

Name _____
Date _____
Class _____

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Food Allergies

What is a food allergy?

A food allergy is an abnormal response of the immune system to otherwise harmless foods, such as peanuts, nuts, milk, eggs, soy, fish, shellfish, and wheat.

What are the symptoms of an allergic reaction?

Symptoms can include hives, vomiting, diarrhea, and respiratory distress. In some cases, one bite of food can bring on anaphylaxis, a severe reaction that involves various areas of the body simultaneously. In extreme cases, it can cause death.

How can food allergies be managed?

The only way to manage food allergies is to strictly avoid the foods to which someone is allergic. Individuals with food allergies should learn how to interpret ingredients on food labels and how to spot high-risk food.

Source: Food Allergy Network, www.foodallergy.org/

Food Allergy

Facts and Fiction

General Facts About Food Allergies

1. A food allergy is the immune system's reaction to a certain food; the immune system creates antibodies to that food. When these antibodies react with the food, histamine and other chemicals (called mediators) are released from various cells within the body. These mediators cause hives, asthma, or other symptoms of an allergic reaction.
2. Eight foods cause 90 percent of all food allergic reactions. They are milk, eggs, wheat, peanuts, soy, tree nuts, fish, and shellfish.
3. There is no cure for food allergies. Strict avoidance (by reading ingredient listings on food packaging) is the only way to prevent a reaction.
4. Children with asthma and food allergies are at increased risk for a severe reaction.
5. Symptoms can include vomiting, diarrhea, cramps, hives, swelling, eczema, itching, or swelling of the lips, tongue or mouth, itching or tightness in the throat, difficulty breathing, or wheezing.
6. Allergic symptoms can begin within minutes up to two hours after ingesting the food.
7. Milk is the most common cause of food allergies in children. Other foods most commonly cited are eggs, wheat, peanut, soy, and tree nuts.
8. Peanuts, nuts, fish, and shellfish commonly cause the most severe reactions.
9. Up to 5 percent of children have food allergies.
10. Most children outgrow food allergies, although an allergy to peanuts and tree nuts is considered lifelong.

How Little Does it Take?

1. As little as half a peanut can cause a fatal reaction for severely allergic individuals.
2. Some severely allergic children can have a reaction if milk is splashed on their skin.
3. Being kissed by someone who has eaten peanuts for example, can cause a reaction in severely allergic individuals.

Facts and Fiction, Cont'd.

Anaphylaxis Facts

1. Anaphylaxis is a sudden, severe, potentially life-threatening allergic reaction. It can be caused by food allergy, insect stings, or medications.
2. Although any food can potentially cause anaphylaxis, peanuts, nuts, shellfish, fish and eggs are foods that most commonly cause this reaction.
3. As little as one fifth of a teaspoon of the offending food has caused death.
4. Symptoms can include hives, swelling (especially of the lips and face), difficulty breathing (either because of swelling in the throat or an asthmatic reaction), vomiting, diarrhea, cramping, and a fall in the blood pressure. These symptoms can occur in as little as five to fifteen minutes.

Food Allergy Myths

1. **Myth: Approximately 25 percent of adults have food allergies.**
However, scientific studies show that only 1 to 2 percent of adults truly have a food allergy.
2. **Myth: Food allergies are not real.**
Not true. An allergic reaction involves the body's immune system. In the case of food allergy, the immune system misinterprets food as a harmful invader and releases histamine and other chemicals to protect itself from harm. Symptoms can include hives, vomiting, diarrhea, and respiratory distress.
3. **Myth: Food allergies should not be taken seriously.**
Every year more people die of food allergic reactions than allergic reactions caused by insect stings. Food allergies must be taken seriously.
4. **Myth: Food additives and artificial flavors cause the majority of food allergic reactions.**
Contrary to common belief, natural foods account for the majority of allergic reactions. The foods that most commonly cause reactions are peanuts, milk, eggs, wheat, soy, tree nuts, (almonds, walnuts, pecans, etc.), fish, and shellfish. These foods may appear in foods as ingredients or under natural flavors.

Source: Food and Allergy Network.www.foodallergy.org/

Food Guide Pyramid Poster Grade Sheet

Name _____

Class Period _____

Breads, cereal, rice, and pasta _____ / 11

Vegetables _____ / 5

Fruits _____ / 4

Milk, Yogurt, and Cheese _____ / 3

Meat, Dried Beans, Eggs, and Nuts _____ / 3

Fats, Oils, and Sweets _____ / 1

Pyramid labeled _____ / 3

Total _____ / of 30 possible points

which equals _____ / 100 (Divide total points by 30.)

Food Guide Pyramid Poster Grade Sheet

Name _____

Class Period _____

Breads, cereal, rice, and pasta _____ / 11

Vegetables _____ / 5

Fruits _____ / 4

Milk, Yogurt, and cheese _____ / 3

Meat, Dried Beans, Eggs, and Nuts _____ / 3

Fats, Oils, and Sweets _____ / 1

Pyramid labeled _____ / 3

Total _____ / of 30 possible points

which equals _____ / 100 (Divide total points by 30.)

Special Nutrition Requirements Across the Life Span	
Life Span Period	Nutrition Requirements
Pregnancy (includes nursing mothers)	Approximately 300 additional calories are required each day for increased energy needs. Weight gain should average between 24 to 28 pounds during pregnancy. A well-balanced, nutritious diet is important because of the increased need for protein, vitamins, and minerals. The diet should include more milk products and more fruits and vegetables.
Infancy (Birth through 1 year)	Most of the infant's nutritional needs during the first year are met through human milk or infant formula. Formulas contain amounts of protein, vitamins, and minerals recommended by the American Academy of Pediatrics. Some formulas are iron-fortified. It is not recommended that solid foods be given to infants until four to six months of age.
Early Childhood (2 years through 5 years)	Childhood obesity and iron-deficiency anemia are the two nutritional problems most commonly diagnosed during childhood. Children should be fed nutritious foods at every meal. Breakfast is especially important, and nutritious snacks help meet the child's daily nutrient needs. Iron-fortified breakfast cereals and lean meat help supply daily iron requirements.
Middle Childhood (6 years through 11 years)	Children should be encouraged to eat a variety of nutritious foods at mealtime and snack time in order to meet their daily nutritional needs for growth and development. Children of this age can learn to choose healthy foods. Snack foods may need to be monitored at this time because consumption of sugary foods and empty calorie foods increases during this stage.
Adolescence (12 years through 19 years)	Rapid growth periods occur in girls between the ages of 10 and 13 years, and in boys between the ages of 12 and 15 years. Consumption of well-balanced, nutritional meals is important during these years. An increased need for calcium occurs due to rapid bone growth. Teens need to increase their intake of foods from the milk group. Poor food choices during adolescence lead to calcium deficiency, iron-deficiency anemia, and excessive intake of saturated fats, sugar, and empty calorie foods.
Young Adulthood (20 years through 39 years)	It is important for young adults to realize that the food choices, health practices, and lifestyle decisions made in the young adult years have significant effect on health and wellness in later life. Eating a well-balanced diet and exercising on a regular basis are good beginnings for young adults. Iron and calcium intakes are very important.
Middle Adulthood (40 years through 65 years)	Adults in this stage need to follow the guidelines for good health and disease prevention. These guidelines recommend that people should eat a variety of foods, maintain desirable weight, avoid too much fat, saturated fat, and cholesterol, increase intake of foods with sufficient starch and fiber, avoid eating too much sugar and sodium, exercise regularly, refrain from smoking and consuming alcohol, and try to limit undue stress.
Older Adulthood (over 65 years)	A healthy diet can help reduce some of the effects of aging. Poor nutritional health at this stage can affect the severity of disease, as well as affect mental function. Some guidelines for nutritional health for older adults include four to six small meals eaten frequently, sufficient intake of vitamins B ₆ , B ₁₂ , thiamin, C, D, E, and the minerals calcium, iron, and zinc is important. Regular exercise is needed to stimulate appetite and food intake. Significant weight loss can increase risk of death following illness or disease.

WHAT ARE NUTRITION STANDARDS?

Americans are fortunate to have nutrition standards based on scientific research to help guide them in making wise food choices that promote good health and reduce the risk of disease. Learning to use these standards as a basis for making nutritious food choices is an important step in developing good eating habits and a lifelong commitment to good nutrition.

Recommended Dietary Allowances and Dietary Reference Intakes

The Food and Nutrition Board of the National Academy of Sciences was established in 1940 to study issues of national importance pertaining to the safety and adequacy of the nations' food supply, to establish principles and guidelines for adequate nutrition, and to render authoritative judgment on the relationships among food intake, nutrition, and health, at the request of various agencies. One of the Food and Nutrition Board's first actions was to publish the first edition of the *Recommended Dietary Allowances (RDA)*, based on scientific data of the nutrients needed to ensure adequate nutrition for people in the United States. The *RDA* are a set of nutrient standards established for the maintenance of good nutrition. These standards are based on the energy and nutrients needed for good health and that reduce the risk of chronic disease.

Since the establishment of the *RDAs*, scientific knowledge related to nutrition and health has increased dramatically. This new knowledge includes findings that show the interrelationships of diet, nutrition, and many chronic diseases. Therefore, the Food and Nutrition Board, in partnership with Health Canada, has created *Dietary Reference Intakes (DRI)* to refer to three types of reference values used to determine nutritional adequacy. The *RDA* is one of these three reference values. The other two are known as *Estimated Average Requirement (EAR)* and *Tolerable Upper Intake Level (UL)*. This new information will assist dietitians, physicians, nutritionists, and other professionals in designing dietary plans that work in concert with other health practices in treatment and prevention of chronic disease.

Nutrition Labeling

From the mid-sixties until the late 1980s, nutrition information on food labels was based on the *United States Recommended Daily Allowances (USRDA)* which was a version of the *RDA* using the highest dietary allowances in each age group. Many consumers found the *USRDA* difficult to understand. In 1990, President George Bush signed the Nutrition Labeling and Education Act into law. The Food and Drug Administration (FDA) was then charged with developing new regulations for food labels.

In 1993, the FDA implemented the *Daily Values* for use on food labels with the intent that all manufacturers would provide the same nutrition information on food labels. The Daily Values replace the *USRDA* and contain two sets of standards for nutrition labeling: (1) *Reference Daily Intake (RDI)* are standards set for protein, vitamins, and minerals; and (2) *Daily Reference Values (DRV)* are the second set of standards and represent food labeling values for food components and nutrients such as cholesterol, fat, and fiber, that do not have an *RDA* but are related to nutrition, health, and prevention of disease.

Some food packages make claims such as "light", "low fat", and "cholesterol free." In the past, "light" could mean "lighter color." Now, these claims can be used only if a food meets strict government definitions. With food labels that give nutrition information in a standardized and easy-to-read format, consumers are able to use food labels as a basis for meal planning, food selection, and promoting the nutritional health of family members.

Nutrient Analysis

[illegible]

Nutrient Analysis

	Protein	Vitamin A	Vitamin D	Vitamin E	Vitamin K	Vitamin C	Thiamin	Riboflavin	Niacin	Vitamin B 12	Calcium	Phosphorus	Iron	Zinc	Sodium	Fluoride	Potassium
Totals from Part A																	
Part B How do totals compare to the needs of the following individuals at various stages of the life cycle? Indicate "high," "low," or "adequate."																	
3 year old																	
15-year-old male																	
15-year-old female																	
51-year-old male																	
51-year-old female																	
Pregnant woman																	

Name _____

Class Period _____

Fast Food Dining

Your parents have gone out of town for the day. You choose to eat all of your meals and snacks at fast food restaurants. Your choices are the following:

- Arby's
- Burger King
- Dairy Queen
- Domino's
- Hardee's
- KFC
- McDonald's
- Pizza Hut
- Subway
- Taco Bell
- Wendy's

Make your selection of restaurants before you go to the computer. You will be using the web site, Fast Food Finder (www olen.com/food/) and the nutritional analysis software program. Place your order on the computer for each meal, and print the nutritional data. You will use the nutritional data to complete the Fast Food Dining Food Intake Data and Fast Food Dining Report of Nutritional Analysis Sheets. Attach your nutritional data sheets to this packet prior to turning it in.

Menu

Breakfast

I ate at _____

I ordered: _____

Dinner

I ate at _____

I ordered: _____

Lunch

I ate at _____

I ordered: _____

Snacks

I ate at _____

I ordered: _____

Fast Food Dining

Food Intake Data

Meal/Snack Totals

	Calories	% calories of the day	Fat grams	Cholesterol mg.	Protein grams	Vit. A %	Vit. C %	Niacin %	Thiamin %	Riboflavin %	Calcium %	Iron %	Sodium mg.
Breakfast													
Lunch													
Dinner													
Snack													
Snack													
Snack													
Snack													
TOTALS													

Fast Food Dining

Report of Nutritional Analysis

Directions: Use the RDA, DRI (Dietary Reference Intakes), and information from your Fast Food Dining Food Intake Data Sheet to complete this report.

Calories/Nutrients	RDA or Dietary Reference Intakes	Was your day's intake high, low, or acceptable?	Suggestions for Improvement (food sources)
Calories			
Fat			
Cholesterol			
Protein			
Vit. A			
Vit. C			
Niacin			
Thiamin			
Riboflavin			
Calcium			
Iron			
Sodium			

What is Reliable Nutrition Information?

What are your sources for information related to nutrition, health, and wellness? Is it magazines, radio and television? Do you know anything about the credibility of these sources?

Nutrition Experts, Agencies, and Organizations

We are living in a time of “information explosion;” there is more information available than consumers can absorb and critically evaluate. This is especially true in areas related to nutrition, health, and food science. The media abounds with claims for weight loss remedies, miracle cures for ailments and “beauty” concerns, and recommendations for megadosages of vitamins and helps to fix almost anything.

It is important to become a wise and cautious consumer of nutrition and health information. The best sources of reliable nutrition information and sound advice on weight loss and diet-related disorders are agencies, organizations, and institutions that staff qualified nutrition experts. These professionals have special academic training and credentials in the science of nutrition. Many are registered dietitians (RD) and licensed dietitians (LD); others have advanced degrees in nutrition and health sciences. Many registered dietitians are in private practice with physicians or work in the health care field. The following are some sources of reliable nutrition information:

- Food and Nutrition Board, National Academy of Sciences
- Food and Drug Administration
- Food and Nutrition Information Center, USDA
- American Dietetic Association
- Cooperative Extension Service
- Nutrition, Health, and Food Management Division of the American Association of Family and Consumer Sciences
- Society for Nutrition Education
- Food and Nutrition Science Alliance/ Institute of Food Technology

Nutrition Fraud

There is a massive growth of nutrition and health fraud in the United States today. Persons behind this type of fraud seek financial gain at the expense of consumers searching for solutions to health-related problems. This practice, often referred to as “junk science,” has grown throughout the United States due to increased consumer interest in personal health care and those seeking a “quick fix” to diet and health problems. Anytime you hear claims that appear to be “unbelievable,” recall what you have learned about sources of reliable nutrition information and nutrition fraud. Take extreme caution when responding to advertisements and claims such as:

- Recommendations that promise a quick fix
- Dire warnings of danger from a single product or regimen
- Claims that sound too good to be true
- Simplistic conclusions drawn from a complex study
- Recommendation based on a single study
- Dramatic statements that are refuted by reputable scientific organizations
- Lists of “good” and “bad” foods
- Recommendations made to help sell a product
- Recommendations based on studies published without peer review
- Recommendations from studies that ignore differences among individuals

As a conscientious and informed consumer, it is important that you learn to distinguish reliable nutrition and health information from nutrition fraud. You can protect your family and friends from falling victims to this type of fraud by sharing your knowledge of reliable sources of nutrition information.

YOU BE THE JUDGE

▲ There are many sources of nutrition and wellness information available to use, but not all of them are reliable. Taking action on unreliable information can mean wasted money or time, or even personal harm to you or your family members. The chart below can help you evaluate sources of information.

Look for information that . . .

Beware if the information . . .

Uses a logical, unemotional approach

Appeals to emotion through fear, is vague or general

Uses federal agency, university, and related studies to make a point

Criticizes federal regulatory agencies

Recommends seeing a doctor rather than self-diagnosis

Recommends self-diagnosis

Makes no "cure all" or "miracle claims" for a food, brand-name product, specific nutrient, or diet for diseases or conditions not proven medically to have easy cures

Claims that a food, brand-name product, specific nutrient, or diet will cure such conditions as cancer, diabetes, arthritis, fatigue, or allergy. Lists symptoms (some of which are common to all people) that are said to be cured by a particular food, product, or diet. Promotes or sells a product or diet as a "cure-all"

Supported by research studies that are available to the public in libraries, especially studies reported in professional journals

Uses testimonials and hearsay evidence to back claims, uses claims like "doctors say . . .," uses claims that are contrary to scientific research and lack carefully controlled studies to provide new evidence

Recommends a well-balanced diet (including all food groups) in addition to exercise, for purposes of weight reduction

Recommends elimination of a food group or a type of nutrient from the diet for the purpose of weight reduction or as a cure

Recommends vitamin doses in line with Recommended Dietary Allowances (RDAs) except for certain conditions (such as pregnancy, serious illness, or under a doctor's supervision)

Recommends doses of vitamins or minerals greater than the Recommended Dietary Allowances (RDAs)

Name _____
Class Period _____

Evaluation of Nutritive Supplements

	Cost	FDA Approved?	Nutritive Claim(s)	Documentation Supporting or Refuting the Claim(s)	Your Evaluation of Product
Station #1 Product Name					
Station #2 Product Name					
Station #3 Product Name					
Station #4 Product Name					
Station #5 Product Name					
Station #6 Product Name					
Station #7 Product Name					
Station #8 Product Name					
Station #9 Product Name					
Station #10 Product Name					

Supplements for Muscle Gain

Situation:

Matt, a varsity basketball center, walks into a mall nutrition store and tells the clerk he wants more muscle but not necessarily a lot of weight gain. The clerk sells him fifty dollars worth of amino acids (one jar) and fifty dollars of other supplements. Matt takes the supplements while at summer basketball camp.



What happened to Matt?

Matt felt he gained muscle mass. Why? Matt is growing. His basketball camp provided intense training. Matt's male hormones promote natural muscle growth. Both the intense training and normal growth would result in increased muscle mass without taking any supplements.

Why do athletes continue to take supplements, like amino acids, when they don't achieve results?

Look over these facts and decide for yourself.

Amino acid claims:

Increase release of human growth hormone
Promote muscle growth
Increase strength

Amino acid facts:

Weight lifting and endurance training increase growth hormone levels, amino acids don't.*
Combining amino acid supplements with exercise does not increase growth hormone levels above those achieved with exercise. A proven method to increase strength and performance requires a balanced diet rich in protein and other nutrients combined with weight lifting and endurance training.

Amino Acid Supplement Content:

200-500 milligrams of amino acids per tablet

Compare To One Ounce of Meat:

7000 milligrams of amino acids per ounce

What's NOT proven to improve performance:

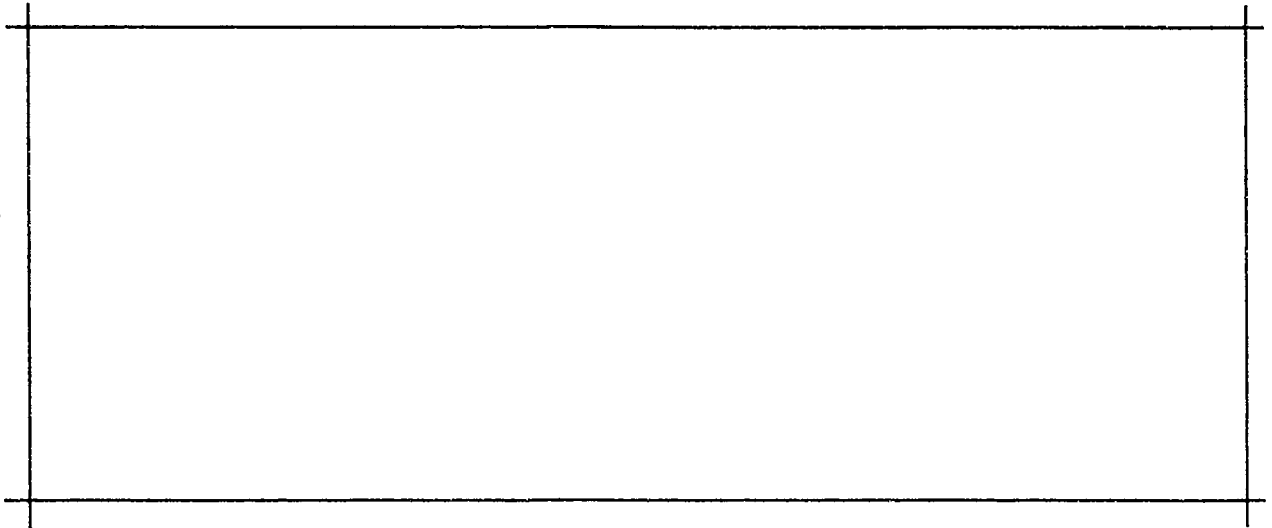
Amino acids Boron Carnitine Choline Chromium Coenzyme DHEA
Gamma-Oryzanol Ginseng
Glandulars (extracts from testes, pituitary or adrenals) Inosine Medium-Chain Triglycerides
(MCT oil)
Omega 3 Fatty acids Similax Vitamin B-12 Yohimbine

*Reference: Lambert, M.L., et al. Failure of commercial oral amino acid supplements to increase serum growth hormone concentrations in male body builders. Int. J. Sports Nutr. 3:290-297, 1993

Source: Copyright 1998 Iowa State Beef Industry Council and CENEX/Land O'Lakes Member Cooperatives
This sheet may be reproduced for class use.

Assessing the Nutritional Needs of Individuals at Various Activity Levels

Directions: In the box below, illustrate nutritious meals for one day by either drawing various foods, clipping pictures from magazines, or listing foods. Then evaluate the day's meals to determine how they meet the nutritional needs of the individuals listed. Assess how the meals could be modified to meet special needs of the various individuals.



1. An eighteen-year-old high school football player
Special nutritional needs

How could the meal be modified to meet his nutritional needs?

2. An older adult man, recovering from a broken hip, using a cane
Special nutritional needs

How could the meal be modified to meet his nutritional needs?

3. A five-year-old girl who plays soccer
Special nutritional needs

How could the meal be modified to meet her nutritional needs?

4. A pregnant woman confined to bed rest due to complications of the pregnancy
Special nutritional needs

How could the meal be modified to meet her nutritional needs?

Nutritional Assessment of Personal Food Intake

Directions: Using the nutritional analysis of your one-day food recall, calculate the percentage of the RDA or DRI (Dietary Reference Intake) consumed for each nutrient listed below. Be sure to locate your gender and age group on the RDA and DRI charts. Use a calculator for this exercise.

1. Divide the amount of each nutrient consumed by the recommended amount for each nutrient.

Example: Seventeen-year-old Mary consumed 6 grams of protein.

Divide the amount consumed by the recommended amount to get the percentage consumed. $6 \text{ divided by } 44 = 0.136$

To convert to percentage, multiply 0.136 by 100 (0.136×100) = 13.6% or 14%.

Mary's protein intake was only 14% of the RDA.

2. Record your findings here. Attach a copy of your food recall to this page.

	Amount consumed	RDA/DRI	Percentage of RDA/DRI consumed
Example:	6 gr.	44 gr.	14%
Protein			
Vitamin A			
Vitamin E			
Vitamin K			
Vitamin C			
Iron			
Calcium			

Scenario

You are a registered and licensed dietitian in private practice. Your patients are sent to you on referral from physicians. You are required to explain to Keith, a new patient, the diet that you have chosen for him. Show the patient how the new diet follows recommended dietary guidelines based on the individual's health needs. Keith knows very little about how to follow such a diet, and he is resistant to the notion of changing his eating habits. Develop sample menus for one day and use a nutritional analysis computer program to verify that the menu plan follows the prescribed diet. Work with your partner to write a dialogue between the dietitian and the patient. You must convince the patient of the necessity to adopt this type of diet due to his current medical condition and to avoid any further health problems. Explain in detail the procedures for the patient to follow. You and your partner will present your dialogue to the class.



The Nutrition Advisor

Directions: Assume the role of a “nutrition advisor” who writes a column for nutrition.com. Use information learned in class, from your textbook or other resources about nutritious foods, functions of the nutrients, individual needs, and the role of nutrition in managing health and wellness to answer the following letters from your readers about their nutrition concerns.

nutrition advisor@nutrition.com

I am on the school wrestling team. I eat lots of carbs and protein during training and try to limit fats to a minimum. I'm having problems with my weight. I don't eat the day of or the day before a meet to make sure I stay in my weight range. After a meet, I'm really hungry and eat everything in sight. Then I gain too much weight and have to either not eat or exercise lots more. Sometimes I feel really tired and don't wrestle very good. Could it be my diet?

confusedwrestler@hs.com

nutrition advisor@nutrition.com

After my parents leave for work, I take care of my ten-year-old sister until we go to school. I can't really cook, and she really doesn't like cereal or oatmeal or much of anything really. Most mornings, she just skips breakfast. Is this okay?

concernedsister@home.com

nutrition advisor@nutrition.com

I'm twenty-eight and have just found out I'm pregnant. My husband says I should be eating for two and gets mad when I don't eat double of everything! He is afraid (and so am I) that the baby isn't getting all the nutrients it needs. Should I be using nutrient supplements?

pregnant@last.com

nutrition advisor@nutrition.com

In the last few years, I have steadily gained weight. I work on a computer approximately seven hours a day. By the time I get home from work and get my family fed, I have little time or energy to do anything but sit in front of the television until bedtime. I know I need to take off a few pounds, but don't know the best way to do it. Nothing I've tried so far has worked. I probably need to join a health club or something, but when would I have time? What should I do?

overweight@toobusy.com

STEPS IN DECISION MAKING

5. *Evaluate* the decision.
4. *Act* on the decision.
3. *Choose* the best alternative.
2. *List* all possible alternatives.
1. *Identify* the decision to be made or the problem to be solved.

Internal and External Influences on Food Choices

Many factors influence food choices. These factors fall under two broad categories — internal influences and external influences. The factors that influence food choices may be very different from person to person or group to group.

Internal Influences

Physical Needs

hunger
nutritional requirements
activity level
general health status
energy level

Psychological Needs

appetite
emotions or feelings
body image
attitudes

Personal Food Preferences

taste
smell, color, texture of food
associations of food with positive
or familiar activities

Knowledge of Nutrition and Healthy Eating Practices

External Influences

Food Availability

family choices
growing seasons
food production facilities
food distribution channels

Advertising Claims

more energy
better athletic performance
improved health
better self-image

Social Settings

family mealtime
school lunches
parties
movies
sporting events

Society and Culture

ethnic traditions
religious beliefs
family traditions
peer preferences
family patterns and routines

Individual and Family Income

what foods people can afford today

Time of Day

being accustomed to eating at a certain
time of day

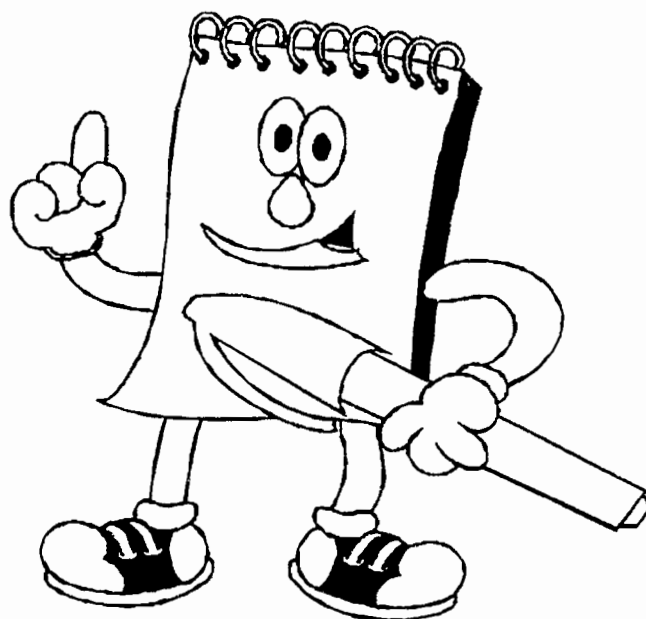
Rating Influences on Food Choices

Directions: Rate each of the following factors according to those that have a major effect on your food choices, those that have a moderate effect, and those that have little or no effect on your food choices. Place a ✓ in the appropriate column.

Factors	Major Effect	Moderate Effect	Little or No Effect
What my family eats			
Advertising			
Emotions or feelings			
Hunger			
Controlling my weight			
Ethnic traditions			
Nutritional benefits of food			
How food tastes			
What friends eat			
My attitude and feelings toward a food			
How a food affects my health			
What food costs			
How food looks			
Season of the year			
Social activities			
What foods are available			
What food can do to make me look better			

Advertising Techniques That Influence Food Selections

- Promise of better health: more energy, more physically fit
- Promise of better looks: sex appeal, improved appearance
- Promise of better performance: better athlete, better on the job
- Endorsements: athletes, movie stars, experts
- Increased enjoyment: fun, tastes good, makes you happy
- Promotes your social standing: increases status, makes you popular

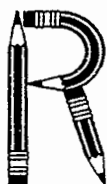


The Impact of Peer Pressure on Food Choices

Case Studies

- (1) Karen enjoys eating lunch with her friends every day at school. They always eat at the same table and they even eat the same thing for lunch every day: two helpings of French fries, ketchup, and a diet soda. Karen cannot imagine eating anything else, but lately she has been thinking that she should eat something more nutritious. She is afraid her friends will make fun of her if she packs her lunch or chooses the food service menu items.
- (2) Robert is nervous about making plans for prom. All his friends are taking their dates to an expensive restaurant. Robert can barely afford the tuxedo and the flowers, let alone pay \$75.00 for dinner. His mother has suggested that he bring his date to their home and she will make a romantic dinner for the two of them. Robert would like to be with his friends and their dates, and wonders what they will think if he decides to do something different from them.
- (3) Gayle is about fifty pounds overweight and has committed herself to making low-fat food choices to lose weight. Gayle has no problem making nutritious choices at home, but she finds it difficult to eat low-fat foods when she is with her friends. They are always eating, and their choices are not so nutritious. They eat pizza after the football game, potato chips, and candy bars from the vending machines after school, and French fries at the local fast food restaurant for a snack. Gayle is wondering whether she should just avoid being around them.
- (4) Brian is on the wrestling team along with three or four of his best friends. As one of the biggest meets of the year approaches, Brian and his friends discuss the weight classes in which they will compete. His friends decide to drop some weight to get in the right classes. Their plan is not to eat for at least two or three days before the meet. Brian knows that this is not the way to perform his best at the meet, but his friends can do it, so why can't he?
- (5) Rita is a cheerleader and all her friends are also on the squad. They are extremely conscious of their weight, even though they are all normal weights for their body type and height. Still, they are all concerned about avoiding fat at all costs. After taking a nutrition course at school, Rita learned about the importance of a balanced diet, but she still avoids eating any type of fatty foods in front of her friends.

Problem Solving



Recognize the problem.



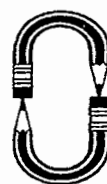
Evaluate information needed to solve the problem.



Analyze choices and consequences.



Select the best choice.



Outline and implement a plan of action.



Note the results of your action.

Solving Problems Through Effective Reasoning

In order to reason through problems and find the best solution for self and others, it is important to consider many things about the problem, the situation, the possible solutions, and the consequences of your choice. The REASON model can help you work through complex problems. The components do not need to be used in the order given, but each component is important to the reasoning process.

Recognize the Problem: Problems can be very complex, and sometimes just identifying the problem itself can be a real challenge. Each problem has a unique context, and the context of the problem can influence the solution. At this point, it is important to consider what you really want to happen when this problem is resolved — in other words, determine your “desired ends.” Ask yourself the following:

- What is the problem?
- Why is it important for me to address this problem?
- What is the context of this problem?
- What caused the problem?
- Who is involved?
- What factors about this problem will affect my decision about what to do (resources available and situational factors)?
- What goals do I have for the solution to this problem? What are the desired ends I want to achieve?

Evaluate Information Needed to Solve the Problem: Solving problems requires information about both facts and priorities. Information about facts includes the concepts and knowledge that will help you develop and evaluate choices. Information about priorities includes your personal priorities and the priorities of others involved who will help you decide which choice is best. Ask yourself the following:

- What factual information is needed?
- Where can I obtain this factual information?
- What are my personal priorities regarding this problem situation? Which of these priorities are most important?
- What are the priorities of others involved in this situation? How will those priorities influence my decision about what to do?
- What criteria will I use to decide which is best?

Solving Problems Through Effective Reasoning, Cont'd.

Analyze Choices and Consequences: There is always more than one choice involved in a problem. Sometimes there may be many choices. Even doing nothing about a problem is a choice. Each choice carries with it possible consequences, consequences for yourself and for others as well as both short-term and long-term consequences. Ask yourself the following:

- What choices are possible?
- What are the short-term and long-term consequences of each choice for myself and others?

Select the Best Choice: Making a decision about which alternative is best means evaluating each alternative against identified priorities and desired ends. Ask yourself the following:

- Which choice best reflects my priorities and the ends I desire regarding this problem?
- Which choice would result in the most positive consequences for myself and others?
- Which choice works best for this particular situation?

Outline and Implement a Plan of Action: Problems are not solved until a reasoned decision is put in to action. Action requires careful planning. Ask yourself the following:

- What do I need to do to carry out this choice?
- What resources do I need to carry out this choice?
- How can I organize these various tasks to achieve this solution?

Note the Results of Your Action(s): Evaluating the outcome of your choice will help you determine if it was the best solution and will help you continue to develop your problem-solving skills. Ask yourself the following:

- Would I make the same choice again? Why or why not?
- What have I learned?
- How will this problem-solving experience affect my problem solving in the future?

Family Eating Patterns Survey

The Nutrition and Food Science classes at _____ school are studying family eating patterns. "Eating patterns" refer to the "what, where, when, and with whom" of eating. The students and the teacher would greatly appreciate your help on this assignment. Please complete the following questions about the eating patterns of your family. Keep in mind that there are no right or wrong answers. This is just a survey.

1. Do you usually eat breakfast? If not, why?
2. How many meals do you eat in one day?
3. How often do you skip a meal? Which one and why?
4. How do you select the food you eat?
5. How often does your family eat meals together at home?
6. Do you usually eat meals with your family? If not, why?
7. How often does your family eat meals away from home?
8. When not eating at home, where does your family prefer to eat?
9. What are some nutritious food choices offered by your favorite eating establishments?
10. Do you eat snacks on a daily basis? If so, what snacks do you usually eat?
11. Do members of your family maintain a desirable weight?
12. Do you or any of your family members try to avoid too much of the following:
 - fat?
 - cholesterol?
 - sugar?
 - salt?
13. How do the eating patterns of your family compare with the eating patterns of your parents' families when they were your age?
14. How do the eating patterns of your family compare with the eating patterns of your grandparents when your grandparents were your age?
15. In your opinion, what factors have the greatest influence on your family's eating patterns?
16. I am ☐ an adult ☐ a teenager.

Thank you!

How Do You Think A Family's Views on Nutrition Affect Food Habits?

Directions: In the space below, answer the question: "How do you think a family's views on nutrition affect the food habits of a teenage family member?" Give examples to justify your opinions.

Eating Patterns: Past — Present — Future

Sample Meal Pattern For A 1942 Farm Family

6:00 am — Breakfast

Oatmeal
Butter, sugar, and milk
Sausage (2 for husband)
Fried eggs (2 for husband)
Biscuits and butter
Grape jelly
Milk
Coffee

8:00 pm — Supper

Fried pork chops
Gravy
Mashed potatoes
Buttered English peas
Cornbread and butter
Egg custard
Milk

12:00 noon — Lunch

Fried chicken (2-3 pieces)
Gravy
Mashed potatoes
Macaroni and cheese
Green beans
Onions and cucumbers
Hot rolls and butter
Peach cobbler
Homemade ice cream
Lemonade

4:00 pm — Snack

(taken to the field)
Bologna sandwiches (2) with
lettuce and tomato slices
Iced tea

Sample Meal Pattern For A Present-Day Family

6:00 - 7:00 am — Breakfast

Ready-to-eat cereal
Milk
Coffee
Juice

12:00 Noon — Lunch

Hamburger or Sandwich
Potato chips
Soft drink

10:00 am — Break

Doughnut
Coffee
Soft drink

6:00 - 8:00 pm — Dinner

Broiled steak
Baked potato with butter
and sour cream
Salad with dressing
Iced tea
Bread

Sample Meal Pattern For A Family in 2020

Breakfast:

Break or Snack:

Lunch:

Dinner:

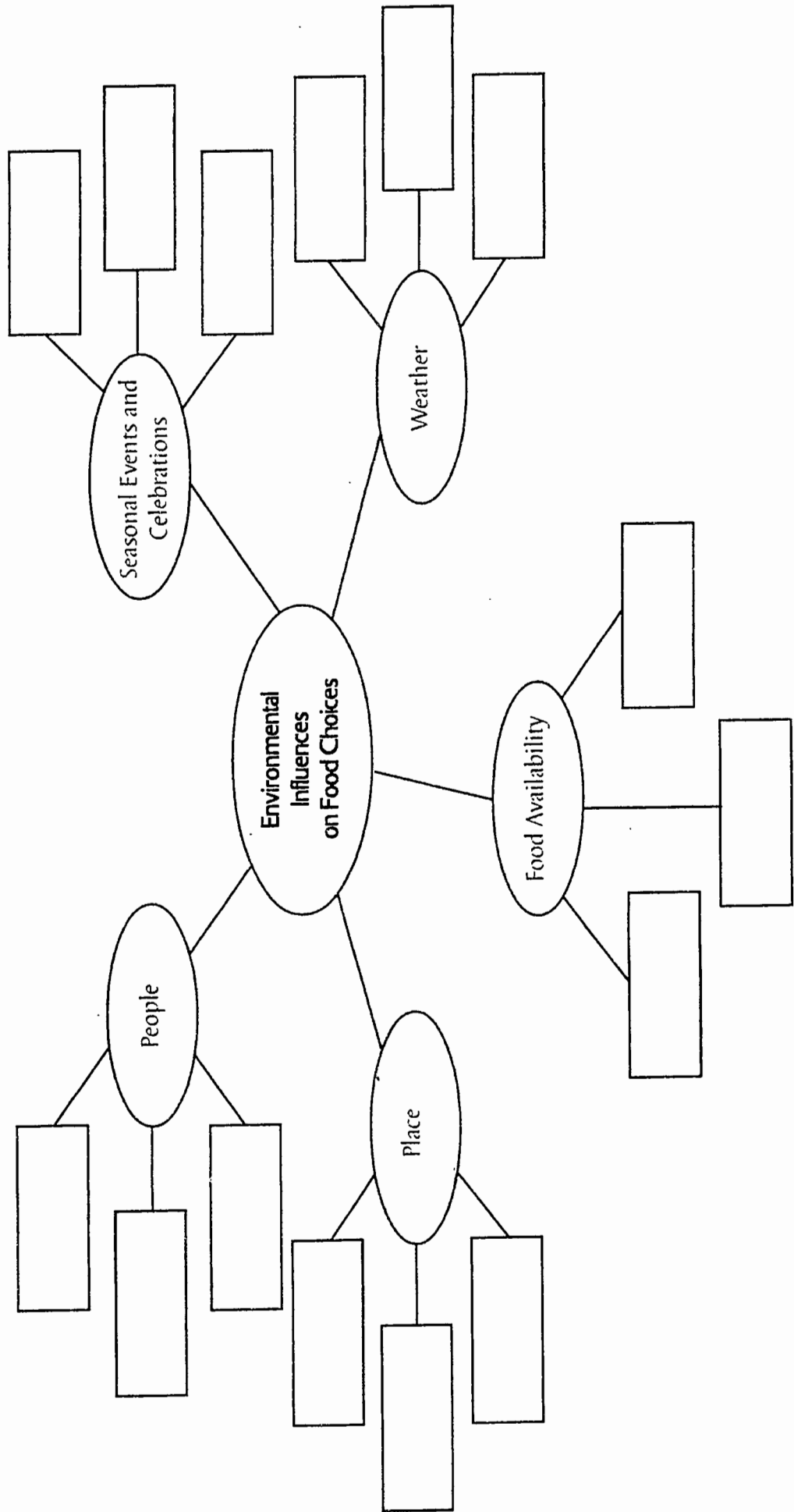
Compare and Contrast

The graphic organizer is designed for comparing and contrasting two items. It consists of the following parts:

- Two empty rectangular boxes at the top for the items being compared.
- Two large black arrows pointing downwards from the top boxes towards a central section.
- A central box labeled "HOW ALIKE?" with a large rectangular area below it containing five horizontal lines for writing.
- Two large black arrows pointing downwards from the "HOW ALIKE?" section towards a bottom section.
- A bottom section labeled "HOW DIFFERENT?" containing two vertical rectangular boxes, each with ten horizontal lines for writing.
- Five horizontal double-headed arrows connecting the two vertical boxes in the "HOW DIFFERENT?" section, indicating a point-by-point comparison.

Environmental Influences on Food Choices

TA 54
TEKS 5E



Food Record

Directions: Record all the food you eat for one week, including meals and snacks. Record additional information related to environmental influences.

Day of Week: _____					
Food eaten	Amount eaten	Time of day	Place where food was eaten	People I ate with	My feelings when food was selected
Hamburger French fries Soft drink	1 1 12 oz.	Lunch	Drive-in	5 friends	Everyone was ordering burgers and fries.

Example:

Making the Menu Fit the Family

Nutrient and calorie needs vary from person to person, depending on age, sex, body size, and activity level. But even if your household contains people with different needs, you usually don't have to plan different menus for each person.

First, plan your daily menus to include at least the lower number of servings of foods from each group. Pick foods from all subgroups regularly. Then, adjust your menus for family members who need different amounts of food:

▲ Provide larger or smaller portions of menu items. For example, one-half cup cooked rice counts as one serving from the grains group; 1 cup of rice counts as two servings. A young child could have a smaller portion, about one-fourth to one-third cup.

▲ For those who need more servings, include additional foods in meals or snacks—a piece of fruit, a peanut butter sandwich, crackers and cheese, and so forth.

Here are some other tips for planning for different family members.



▲ Toddlers and young children

Serve young children the same variety of foods as everyone else, but in smaller amounts to suit their smaller needs. They should have the equivalent of 2 cups of milk each day, but you can serve it in three or four portions. Because small children often eat only a small amount at one time, offer them nutritious "meal foods" as snacks—milk or fruit juice, cut-up fruit, vegetable sticks, strips of cooked meat or poultry, whole-grain crackers and peanut butter, half a sandwich and so forth. To get enough calories to grow, many young children may need higher calorie foods such as whole milk.



▲ Children

Energy needs vary widely for elementary school children. They should eat at least the lower number of servings from each group. If they need more calories, increase the amount of food from the first five groups. Go easy on foods from the fats and sweets group.



▲ Teenagers

All teenagers need three servings of milk, cheese, or yogurt to meet their calcium needs. Teenage boys often need a lot of food. They can eat the higher number of servings from each food group. (With a moderate amount of fat and sugars, this supplies about 2,800 to 3,200 calories.) Some very active boys need even more. Encourage them to eat more foods from each of the first five food groups and to go easy on the sixth food group—foods high in fat and sugars.

Teenage girls usually need more food than the lower number of servings, especially when they are active or growing rapidly. They should increase their servings from the first five food groups. Teenage girls who are active participants in vigorous sports may need the higher number of servings or more. Encourage physical activity rather than repeated dieting to help control weight.



▲ Adults of all ages

Adults should have at least the lower number of servings from each food group. With a moderate amount of fat and sugars, this number of servings provides about 1,600 calories—about the right amount for a sedentary woman and some older adults. However, most adults will need more calories than this, depending on body size and physical activity. Most men can have the middle to upper number of servings in the ranges. The lower to middle numbers of servings in the ranges are more appropriate for most women. Regular exercise is important to maintain fitness. It also allows you

to eat more food to supply the nutrients you need without gaining unwanted weight. Total food intake is most important in weight control, but increasing physical activity helps.



▲ People with special needs

Women who are pregnant or breastfeeding need to include at least three servings of milk, yogurt, or cheese to meet calcium needs. (Teenagers who are pregnant or breastfeeding should have four servings). They should eat more breads and cereals, fruits, vegetables, and meat and meat alternates, too. To meet higher needs for many vitamins and minerals during pregnancy, many physicians also prescribe a multi-vitamin and mineral supplement.

Toddlers, teenage girls, and women of childbearing age may not get all the iron they need from the amounts of food they eat. Be sure to include good sources of iron such as lean red meats, dry beans and peas, dark-green leafy vegetables, whole-grain and enriched breads, and iron-fortified breakfast cereals. Meat and the vitamin C in fruits and vegetables can help the body use the iron in iron-containing foods eaten at the same meal.



▲ Older people

Older people vary in their dietary needs. Many can eat like younger adults. Some elderly people eat relatively little food. They need to eat foods from each of the first five food groups, but they should eat less of foods in the sixth group—fats and oils, sugars and sweets, and alcoholic beverages. Elderly people or others who are on medication for treatment of chronic conditions may have vitamin and mineral supplements or special diets prescribed by their physicians. A dietitian can help you adjust your family menus to meet special dietary needs of these individuals.

Meeting Nutritional Needs of Those in Self-Care

Directions: Answer the following questions related to changing nutritional needs for those in self-care at various stages of the life cycle. The questions are based on the menus below.

Breakfast	
Orange Juice	Milk
2 pieces of French Toast with syrup	
Lunch	
Ham and Cheese Sandwich on Whole-wheat Bread	Iced Tea
Dinner	
Spaghetti with meat sauce	Corn bread
Tossed Salad with Ranch dressing	Chocolate cake
	Tea and Coffee

1. What foods could be substituted in these menus to meet the calcium needs of an older adult living alone who does not drink milk?
2. What breakfast foods could an elementary, school-age child prepare on his or her own?
3. What suggestions would you make for a sack lunch for a ten-year-old boy who makes his own lunch every morning before school?
4. What types of snack foods could you add to these menus to meet the increased nutritional needs of a thirteen-year-old latchkey boy?
5. Write a one-day menu for a twenty-year-old male with cerebral palsy. The individual is confined to a wheelchair. He will be totally on his own to prepare his meals for this day.

Meeting Nutritional Needs of Those in Self-Care, Cont'd.

6. Identify strategies and resources for accommodating the nutritional needs of each of the individuals described above.
 - a. Older adult living alone
 - b. Elementary-age latchkey child
 - c. Thirteen-year-old latchkey boy
 - d. Twenty-year-old male with cerebral palsy and confined to a wheelchair. He spends afternoons and early evenings alone. A caregiver prepares his breakfast and lunch.

Eating Away From Home

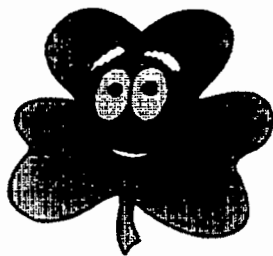
When eating away from home, consider the following guidelines:

- ✓ Select food in light of the entire day's meals and nutritional needs.
- ✓ Select foods which provide nutrients without calorie overload.
- ✓ Select a la carte foods when possible.
- ✓ Avoid salad dressings, empty-calorie foods, sauces, and fried foods.
- ✓ Patronize health-conscious eating places.
- ✓ Vary the type of eating places and the types of food eaten.
- ✓ Take small portions when you serve yourself.
- ✓ If large portions are the only options, consider splitting a portion with someone else or take a portion home for another meal.

Community Food Customs

Directions: Choose a local restaurant in your community from the telephone book. Contact the manager/owner by phone or visit the establishment. Explain to your contact that you are seeking information concerning their restaurant and menu for your Nutrition and Food Science class. After the interview, answer the following questions. Send a thank you note to the person you interviewed.

1. Name of restaurant: _____
2. Title of person interviewed: _____
3. Date of interview: _____
4. What types of food are served at your restaurant?
5. What is the most popular menu item with your customers?
6. What segment of the community patronizes your restaurant? Families? Teens? Business persons? Older adults?
7. Does the community patronize this restaurant according to certain patterns, such as the noon meal, evening meal, holidays, etc? Which pattern is customary in this community for eating out?
8. How would you describe the food customs of this community?
9. What types of training or experience is needed for your type of foodservice business?
10. *(For the student)* Describe at least two things that you learned from this interview.



St. Patrick's Day

Over 40 million Americans claim to be Irish descendants. The Irish have made many contributions in the United States. The contributions include Waterford crystal, Irish linen, Irish stew, and race horses. Leprechauns and shamrocks are associated with Irish folklore.

Fishing is one of Ireland's largest industries, and seafood is an important part of the diet. Potatoes have been the mainstay of the Irish diet. The versatile potato is boiled, mashed, fried, and used in soups, stews, breads, rolls, and cakes. Cabbage, carrots, onions, turnips, and cauliflower are other vegetables grown in the rich Irish soil. Beef is used in economical dishes like corned beef and cabbage. Irish stew is made of pieces of lamb and potatoes in a hearty gravy. Soda bread, brown bread, and soda scones are favorite breads of the Irish.

St. Patrick's Day honors Saint Patrick who was a missionary in Ireland during the AD 400s. In Ireland, March 17 is a national holiday that is celebrated with church services, parades, and sports events. Traditionally, people wear green and display a green three-leaf clover, which is Ireland's national emblem. The focus of food for a St. Patrick's Day celebration might include beef and potato dishes and the color green. It is also celebrated by people of Irish descent outside of Ireland. In the United States, St. Patrick's Day is primarily a nonreligious celebration marked by parades. People may be pinched if they are not wearing green, and the three-leaf clover may be displayed. The first St. Patrick's Day celebration in the United States took place in 1737 in Boston.

An example of a traditional Irish food is Irish Soda Bread.

Irish Soda Bread

Irish soda bread is one of the specialties of the country and is still baked in countless farmhouses and homes all over Ireland. Even today, yeast is seldom used when the bread is homemade. This type of bread is very easy to make.

4 cups whole wheat flour
1 teaspoon baking soda
1 teaspoon salt
2 cups white flour

1 teaspoon cream of tartar (omit if fresh
milk is used)
1 cup buttermilk, sour milk,
or fresh milk

Mix all the dry ingredients together in a bowl and make a well in the center. Add enough milk to make a thick dough. Stir with a wooden spoon. The mixture should be relaxed, but not wet and the mixing done lightly and quickly. Add a little more milk if it seems too stiff. With floured hands, put on a lightly floured board or table and flatten the dough into a circle about 1/2 inch thick. Place on a baking sheet, and make a large cross over it with a floured knife. (This is to ensure even distribution of heat.) Bake at 375 to 400 degrees for about 40 minutes. Test the center with a skewer before removing from the oven. To keep the bread soft, wrap it in a clean towel. This quantity will make 1 large loaf or 2 small ones.

Note: The bread should not be cut until it is quite cold and "set." This takes from 4 to 6 hours.

An Easy Recipe Makeover

Original Recipe

8 ounces egg noodles
2 tablespoons butter
2 cans (7 ounces each) tuna,
packed in oil
1 cup sour cream
3/4 cup whole milk
1 can (3 ounces) sliced mushrooms
1 teaspoon onion salt
1/2 teaspoon salt
1/4 teaspoon pepper
1/4 cup plain bread crumbs
1/3 cup grated Parmesan cheese
2 tablespoons butter, melted

Preheat oven to 350°F. Cook noodles in salted water as directed on package. When cooked, drain and rinse. Return noodles to pot; add butter or margarine. Stir in tuna, sour cream, milk, mushrooms, onion salt, salt, and pepper. Pour into a greased 2-quart casserole. Combine bread crumbs, Parmesan cheese, and melted butter. Sprinkle over casserole. Bake uncovered for 35 minutes. Makes 6 servings.

Nutrition Information per serving

480 Calories (235 Calories from Fat)

	% Daily Value
Total Fat: 26 g	39%
Saturated Fat: 13 g	64%
Cholesterol: 102 mg	34%
Sodium: 1,100 mg	46%
Total Carbohydrate: 34 g	11%
Dietary Fiber: 0 g	1%
Sugars: 3 g	
Protein: 28 g	
Vitamin A	21%
Vitamin C	1%
Calcium	19%
Iron	15%

Makeover Recipe

8 ounces whole-wheat noodles
2 cans (7 ounces each) tuna,*
packed in spring water, drained
1/2 can (10 1/2-ounce) cream of mushroom
soup
1/2 cup puréed low-fat (1%) cottage cheese
3/4 cup skim milk
1/2 cup chopped celery
1/2 cup shredded carrot
1/4 cup chopped green pepper
1 teaspoon onion flakes
1/4 teaspoon each: paprika and tarragon
1/4 teaspoon pepper
1/3 cup grated Parmesan cheese

Preheat oven to 350°F. Cook noodles in unsalted water as directed on package. When cooked, drain. Return noodles to pot; add tuna, soup, cottage cheese, milk, celery, carrot, green pepper, onion flakes, paprika, tarragon, and pepper. Pour into a nonstick 2-quart casserole. Sprinkle with Parmesan cheese. Bake uncovered for 35 minutes. Makes 6 servings.

Nutrition Information per serving

295 Calories (45 Calories from Fat)

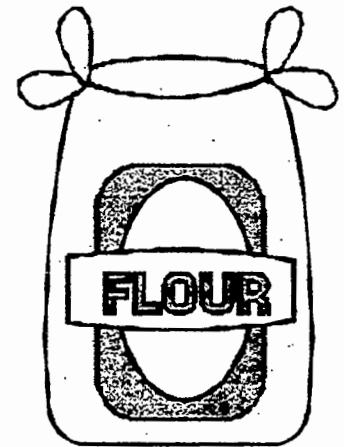
	% Daily Value
Total Fat: 5 g	8%
Saturated Fat: 2 g	10%
Cholesterol: 25 mg	8%
Sodium: 640 mg	27%
Total Carbohydrate: 35 g	12%
Dietary Fiber: 2 g	8%
Sugars: 3 g	
Protein: 29g	
Vitamin A	32%
Vitamin C	19%
Calcium*	17%
Iron	16%

*Use canned salmon in place of canned tuna to increase calcium to 32% Daily Value.

Nutrition in the Kitchen

Making Foods More Nutritious

- Use long or short-grain brown rice in place of white rice to improve fiber content.
- Use whole-grain flours, such as whole-wheat flour, in place of white flour for yeast breads and quick breads. Whole-grain flours are high in fiber and B vitamins.
- Add legumes to soups, stews, casseroles, and salads to increase fiber and protein intake; legumes are excellent sources of B vitamins, iron, and calcium.
- Substitute polyunsaturated vegetable oils, such as canola, safflower, olive, sunflower, and corn in place of saturated oils (palm and coconut), shortening, and lard.
- Save the water from cooking vegetables to add to soups and stews. Many water-soluble nutrients are leached into the cooking water.
- Cook vegetables with the skins and peelings on to preserve nutrients.
- Substitute puréed nonfat cottage cheese, nonfat yogurt, or nonfat sour cream in recipes calling for ricotta cheese or sour cream.
- Replace some of the flour in muffin recipes with oat bran to increase fiber and B vitamins.
- Substitute nonfat dry milk for whole milk in recipes to reduce the fat content.
- Substitute canned fruits packed in water for fruit packed in syrup to reduce the calorie content.
- Add raisins to muffins or breads to increase fiber.



Ten Steps to Supermarket Savvy

1. Plan, plan, plan!
 - a. Plan menus, using advertised specials and coupons.
 - b. Make a list of foods you need and follow your list to avoid impulse purchases.
 - Basic supplies to restock your pantry
 - Ingredients needed for recipes in your menu plan
 - Items listed according to the store layout
 - c. Be prepared to be flexible if you find unadvertised specials.
2. Buy the right amount of food to avoid spoilage or leftovers that won't be used up.
3. Shop at a convenient time, but avoid shopping when you are hungry.
4. Shop as seldom as possible. The more you shop, the more you buy.
5. Evaluate foods for nutritional quality.
 - Read nutrition information on labels.
 - Beware of hidden fat in canned, packaged, and bagged convenience foods.
6. Use unit pricing to compare the cost of similar foods.
7. Be aware of your criteria for food purchases.
 - quality
 - method and time of preparation
 - environmental impact of purchase and preparation
 - cost
 - nutritional quality
8. Plan purchases of perishable foods carefully to avoid waste and shop for these foods last to avoid spoilage or loss of quality.
9. Be aware of foods that are in season, and therefore offered at lower prices and better quality.
10. Be aware of marketing techniques used by food stores to encourage impulse purchases.
 - End-of-aisle displays
 - Checkout displays
 - Impulse foods at eye level
 - Food tasting and samples
 - Heavily advertised products



Consumer Food Buying

Directions: Using the menus you developed for the family in your scenario, make a grocery shopping list. Take your list to the grocery store and complete the following activities.

- (1) Determine the unit price for two different sizes of at least three items on your list. Decide which would be the best buy and explain why.

- (2) Choose one food item on your list and evaluate the environmental impact of several forms of packaging for the product. Choose the package with the least environmental impact and explain your choice.

- (3) Record the prices of all items on your list and add them up to determine the total you would spend if you actually shopped for your list.

- (4) Evaluate your budgeting skills by determining if you stayed within your budget.

TYPES OF APPEALS USED IN FOOD ADVERTISING

▲ Food advertising is everywhere; television, radio, magazines, newspapers, catalogs, billboards, vehicles, T-shirts, display windows, brochures, and displays set up in stores. Some of the more popular appeals used in food advertising are described below. Use magazines to find examples of five types of appeals used in food advertising from the list below. Label each advertisement with the type of appeal. Attach to posterboard or individual sheets of paper as instructed by your teacher. Be prepared to explain your advertisements to the class.



Information — These are ads that give simple, direct information about the food product.

Status — If you use this food product, you will be one of those who “made it,” one who uses only the best, one who has climbed the ladder of success. By using this product, you show that you are the kind of person who enjoys the best foods, that you are really “cool” and relaxed about yourself.

Approval — If you want more friends who like you better, and you want to have more fun, then use this food product.

Endorsement — These ads are designed to make you feel that if you buy this food, you will become more like the well-known person who endorses the product.

Sexual Attraction — If you buy this food, members of the opposite sex will fight over your charms.

Join the Gang — Everybody else eats this food, so why don’t you? That is the “pitch” used in this kind of ad.

Intelligence — This approach suggests that if you use the product, you are sensible and able to avoid advertising gimmicks. You can make up your own mind about what you want to buy or use.

Great Taste — This food product tastes better than all others.

Good Health — This food product is good for you.

The "Hooks" in Food Advertising

▲ The most important appeal in a food advertisement is sometimes referred to as the "hook." Use the five advertisements from the "Types of Appeals Used in Food Advertising" activity to assist you in completing this chart.

Food Ad Description	Appeals Used	Special Claims	"Hook"
1.			
2.			
3.			
4.			
5.			

Name _____

Date _____

Advertisements and the Media

Directions: View food advertisements shown on television. Analyze the advertisements and complete the following chart.

Names of foods advertised	Message of advertisement	Age group focus of advertisements	Names of celebrities on advertisements

Food Label

Nutrition Facts

Serving Size 1/2 cup (114g)

Servings Per Container 4

Amount Per Serving

Calories 90

Calories from Fat 30

% Daily value*

Total Fat 3g **5%**

Saturated Fat **0%**

Cholesterol 0mg **0%**

Sodium 300mg **13%**

Total Carbohydrate 13g **4%**

Dietary Fiber 3g **12%**

Sugars 3g

Protein 3g

Vitamin A 80% • Vitamin C 60%

Calcium 4% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

Components of a Food Label

Nutrition Facts Title

The title "Nutrition Facts" signals the nutrition information.



%Daily Value

%Daily Value shows how a food fits into a 2,000 calorie reference diet. Consumers can use % Daily Value to compare foods and see how the amount of a nutrient in a serving of food fits in a 2,000 calorie reference diet.

Serving Size

Similar food products have similar serving sizes to make it easier to compare foods. Serving sizes are based on amounts people typically eat.

Label Information

The nutrient list covers those most important to your health. Some of this information may have been on older labels, but it is now required.

Daily Values Footnote

Daily Values are the label reference numbers. These numbers are set by the government and are based on current nutrition recommendations. Some labels list the daily values for a daily diet of 2,000 and 2,500 calories. Your own nutrient needs may be less than or more than the Daily Values on the label.

Vitamins and Minerals

Only two vitamins, A and C, and two minerals, calcium and iron, are required on the food label. A food company can voluntarily list other vitamins and minerals in the food.

Calories Per Gram Footnote

Some labels tell the approximate number of calories in a gram of fat, carbohydrate, and protein.

-
- Why do some food packages have a short or abbreviated nutrition label?
-

Food Label Claims

Label Claim*

Calorie Free

Low Calorie

Light or Lite

Light in Sodium

Fat Free

Low Fat

Cholesterol Free

Low Cholesterol

Sodium Free

Very Low Sodium

Low Sodium

High Fiber

Definition

Less than 5 calories

40 calories or less

1/3 fewer calories or 50% less fat;
if more than half the calories are
from fat, fat content must be
reduced by 50% or more

50% less sodium

Less than 1/2 gram fat

3 grams or less fat**

Less than 2 milligrams cholesterol
and 2 grams or less saturated fat**

20 milligrams or less cholesterol
and 2 grams or less saturated fat**

Less than 5 milligrams sodium**

35 milligrams or less sodium**

140 milligrams or less sodium**

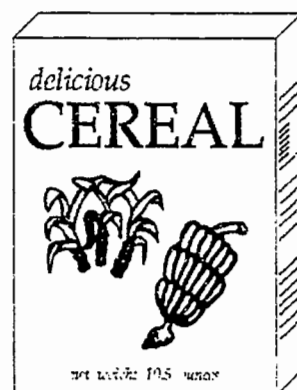
5 grams or more fiber

* Per Reference Amount (standard serving size) (Some claims have higher nutrient levels for main dish products and meal products, such as frozen entrees and dinners.)

** Also per 50g for products with small serving size (Reference Amount is 30g or less or 2 tbsp or less.)

Supermarket Shopping Terms

- Name Brands
- Store Brands
- UPC (Universal Product Code)
- Unit Price
- Customary or U.S. Measures
- Metric Measures
- Standards of Identity
- Sell by Date
- Use by Date



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Brochure Assessment

Part A: Circle the number that indicates how effectively the brochure meets the stated criteria.

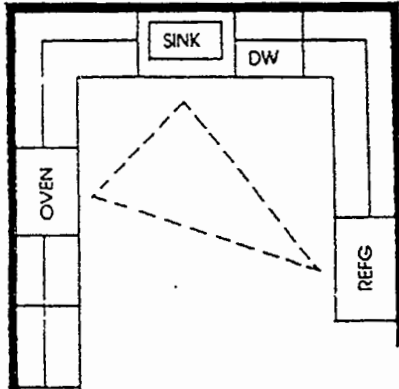
	3	2	1
Quality of Research	Accurate analysis of the research Reliable sources Three or more references used	Fair degree of accuracy Some reliability of resources Two references used	Basic information with inaccuracies Questionable reliability One reference used
Application of Knowledge	Demonstrates in-depth understanding of the topic Accurately uses information in the brochure	Demonstrates general understanding of the topic Uses research information with a fair degree of accuracy in the brochure	Lacks understanding of the topic Uses only the basic parts of the information; several misconceptions
Written Presentation	Well organized content Attractive, well-designed format Message is clear and easy to understand Typed or computer-formatted Strong eye appeal	Generally well-organized content Adequate design for format Message is sufficiently understood Typed or computer-formatted Adequate appeal	Unorganized content; hard to follow Unattractive format Message is difficult to understand Handwritten or type lacks neatness
Creativity	Imaginative; originality demonstrated Graphics that make the work "come alive"	Adequate creativity Some use of graphics that add to the presentation	Lacks originality Few or no graphics used or graphics do not relate to text

Brochure Assessment, Cont'd.

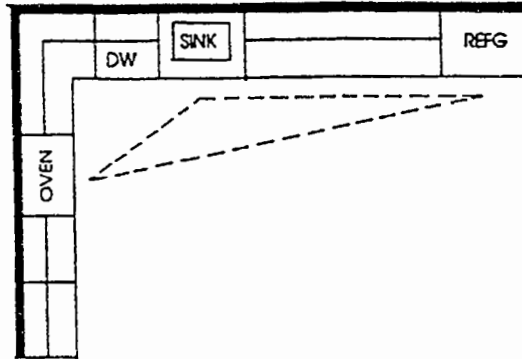
Part B: Write a paragraph that describes how you can use the knowledge gained from this activity.

Kitchen Planning

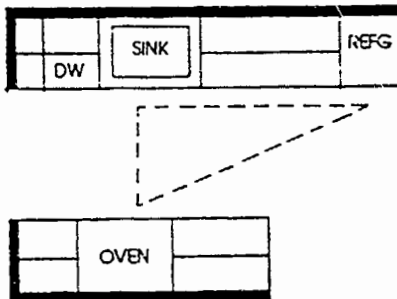
U-SHAPED



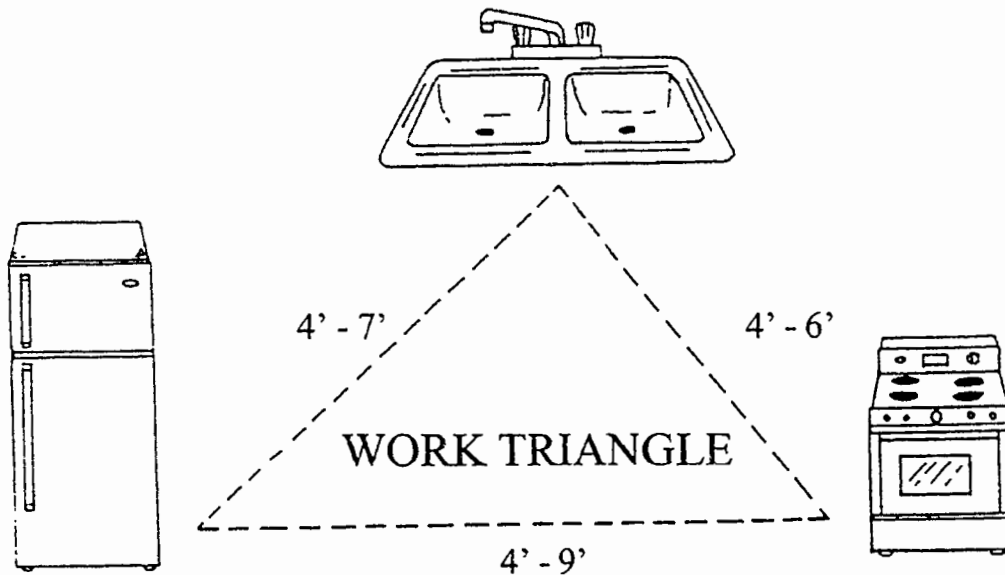
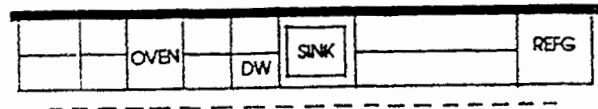
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CORRIDOR SHAPE



ONE WALL



Meal Management Strategies For Busy Families

- ❖ To protect family mealtime for the purpose of family communication, designate certain times during the week for the family to eat together.
- ❖ Maintain a variety of food items that allow family members to prepare nutritious meals when they must eat on their own.
- ❖ Have family members take turns preparing the family meal.
- ❖ Plan a family meal at a site away from home (such as a picnic in a park) to accommodate busy schedules.
- ❖ Use take-out foods for a family meal when schedules do not permit food preparation; the family still eats together.
- ❖ Use convenience foods to shorten meal preparation time.
- ❖ Combine convenience foods with fresh foods to shorten preparation time; add canned or frozen vegetables, instead of fresh, to soups, stews, chili, etc.
- ❖ Prepare part of the meal the night before, if advisable; chop vegetables, make sauces, put casserole ingredients together, etc.
- ❖ Double or triple recipes when possible and freeze the extra in separate containers for meals later on when meal preparation time is limited.
- ❖ Freeze the additional dishes in oven or microwave-safe cookware.
- ❖ Use a permanent marker and label the dish with its name, date, cooking time, temperature, and any other important cooking instructions. Therefore, any family member can begin the meal preparation simply by following the instructions.
- ❖ Use time and energy-saving appliances, such as slow cookers, when meal planning.
- ❖ Plan main course meats so that there are leftovers for stews, soups, casseroles, or salads.
- ❖ Ask family members and friends for “fix ahead” recipes. Prepare several for the freezer when time schedules permit.

Managing Breakfast

Part A:

Recipe

Refrigerator Ginger Muffins

1 1/4 cups shortening	3 3/4 cups flour
1 cup sugar	1 teaspoon ginger
4 eggs	1/4 teaspoon cinnamon
2 teaspoons baking soda	1/4 teaspoon allspice
1 cup buttermilk	2 teaspoons vanilla
1/2 cup dark corn syrup	1 cup pecans, chopped (optional)

Divide the recipe in half:

_____ cups shortening	_____ cups flour
_____ cup sugar	_____ teaspoon ginger
_____ eggs	_____ teaspoon cinnamon
_____ teaspoon baking soda	_____ teaspoon allspice
_____ cup buttermilk	_____ teaspoon vanilla
_____ cup dark corn syrup	_____ cup pecans, chopped

Preheat the oven to 375 degrees with the rack in the center position. Cream together shortening, sugar, and eggs. Dissolve soda in buttermilk, and stir until foamy. Add to creamed mixture. Beat in syrup, flour, spices, and vanilla. Stir in pecans. The batter should appear slightly lumpy. Spoon the batter into the prepared tins, filling the cups only two-thirds full. Bake for 12 to 15 minutes, until the tops are golden brown. Remove the muffins from the pan, and let them cool on a rack.

Note: This batter may be stored in the refrigerator for several weeks.

Managing Breakfast, Cont'd.

Part B:

Review

1. Why is a working knowledge of measurements and equivalents an important food management skill?
2. What food preparation skills are used in this recipe?
3. In what forms can one purchase buttermilk for food preparation?
4. Which form would be most advantageous for someone who doesn't use buttermilk very often? What common ingredients can substitute for buttermilk? In what proportion?
5. Baking soda serves as a leavening agent in this recipe. What other uses does baking soda have in the kitchen?
6. What basic food preparation utensils are needed for this recipe?
7. If you were setting up and equipping your kitchen, what basic ingredients would be beneficial to purchase and keep on hand?
8. Why might this recipe be good for a busy family?
9. What food management skills could be applied by using this recipe?
10. What ingredients could be added to the muffins to increase nutrient content?

Managing Breakfast (answers)

<u>1/2</u> cup plus 2 Tbsp.	cups shortening	<u>1 7/8</u>	cups flour
<u>1/2</u>	cup sugar	<u>1/2</u>	teaspoon ginger
<u>2</u>	eggs	<u>1/8</u>	teaspoon cinnamon
<u>1</u>	teaspoon baking soda	<u>1/8</u>	teaspoon allspice
<u>1/2</u>	cup buttermilk	<u>1</u>	teaspoon vanilla
<u>1/4</u>	cup dark corn syrup	<u>1/2</u>	cup pecans, chopped

- Why is a working knowledge of measurements and equivalents an important food management skill?
It allows one to adapt recipes to individual needs (increasing or decreasing); also allows you to use resources wisely.
- What food preparation skills are used in this recipe?
reading a recipe; measuring; creaming; dissolving; beating; stirring; chopping; greasing; cooling
- In what forms can one purchase buttermilk for food preparation?
regular and dry or powdered
- Which form would be most advantageous for someone who doesn't use buttermilk very often? What common ingredients can substitute for buttermilk? In what proportion?
dry or powdered; milk with 1 T. vinegar added
- Baking soda serves as a leavening agent in this recipe. What other uses does baking soda have in the kitchen?
 - to put out kitchen fires, especially grease fires*
 - an open box in a refrigerator to absorb most smells — replace the box every time the refrigerator is cleaned*
 - use a solution of 4T baking soda to 1 qt. warm water to rid the microwave of odors*
 - use 1/2 box to get rid of smells in the drain — wait a few minutes before flushing the drain out with water*
 - use it to scrub cutting boards to rid them of chopped garlic or onion odors*
 - to remove burned food on the inside of a pan, fill the pan with water to cover the scorch, add 1/4 cup baking soda; bring mixture to a low boil; continue boil until burned food lifts off*
 - add a pinch of baking soda to the cooking water to keep green beans, fresh spinach, asparagus, and peas green*
- What basic food preparation utensils are needed for this recipe?
dry measuring cups; liquid measuring cup; measuring spoons; straightedge spatula or substitute; mixing bowls; mixing spoons; muffin tins; pot holders; timer; cooling rack

Managing Breakfast (answers), Cont'd.

7. If you were setting up and equipping your kitchen, what basic ingredients would be beneficial to purchase and keep on hand?
Answers may vary but could include baking soda; baking powder; cornstarch; all-purpose flour; granulated sugar; brown sugar; biscuit mix; salt; pepper; vanilla extract; cinnamon (ground); cooking oil; nonstick vegetable cooking spray; mayonnaise; honey
8. Why might this recipe be good for a busy family?
Answers may vary but could include the following: can be made ahead of time; batter can be stored in refrigerator and used as needed for several weeks
9. What food management skills could be applied by using this recipe?
Answers may vary but could include time management; food preparation skills, low cost
10. What ingredients could be added to the muffins to increase nutrient content?
Nuts, raisins, dried apricot, chopped apples can be added to the muffins.

Survey of Where People Eat

- Using the class findings, divide the total number of meals in each category by the number of people surveyed. For example, if the total number of meals eaten out by students was 130 and 20 students were surveyed, dividing 130 by 20 would yield 6.5 meals eaten outside the home by the **average** student surveyed.

- Compare each of the eight categories by creating a bar graph to display the results.
 - Average number of meals should be indicated on the vertical axis.
 - Each of the eight categories should be indicated on the horizontal axis.

Student	Adult Not Working Outside the Home	Adult Working Outside the Home	Retired Adult
---------	------------------------------------	--------------------------------	---------------

(individual student findings)

# of meals eaten at home in one week			
# of meals eaten out in one week			

(class findings)

Totals (meals eaten at home)	(total number of meals)	(1)	(2)	(3)	(4)
	(total people surveyed)				
Totals (meals eaten out)	(total number of meals)	(5)	(6)	(7)	(8)
	(total people surveyed)				

Consumer Math

Directions: Circle the correct answer for each of the problems below. Show your work.

- Blane purchased 1 pound 2 ounces of apples, 9 ounces of oranges, and 1 pound 6 ounces of bananas. The fruit weighed a total of _____.
 A. 2 lb 1 oz
 B. 3 lb
 C. 3 lb 1 oz
 D. 3 lb 7 oz
 E. 4 lb
- The formula for changing Celsius to Fahrenheit is
 $^{\circ}\text{F} = 9/5 ^{\circ}\text{C} + 32$
 Where C is the temperature in Celsius and F is the temperature in Fahrenheit. A recipe calls for you to bake an apple pie at 205° Celsius. Celsius is approximately the same as the Fahrenheit temperature of _____.
 A. 300
 B. 325
 C. 375
 D. 400
 E. 425
- A recipe calls for $1 \frac{3}{4}$ cups of flour. If the recipe is to be doubled, how many cups of flour are needed?
 A. $2 \frac{1}{2}$ cups
 B. $2 \frac{3}{4}$ cups
 C. $3 \frac{1}{4}$ cups
 D. $3 \frac{3}{4}$ cups
 E. none of the above
- Each can of mixed fruit contains 1 and $\frac{1}{2}$ cups of fruit. How many cans should be purchased if $4 \frac{1}{2}$ cups are needed?
 A. 3
 B. 5
 C. 7
 D. 14
 E. none of the above
- Christina earns \$225 a week. If one-fifth of her income is used for food, what is the amount Christina spends for food?
 A. \$40.50
 B. \$45.00
 C. \$180.00
 D. \$1125.00
 E. none of the above
- A pound of apples costs \$1.20. How many pounds can Michelle purchase with \$6.00.
 A. 2 lb
 B. 4.8 lb
 C. 5 lb
 D. 7.2 lb
 E. none of the above
- The price of each caramel is \$0.08. If the price marked on a bag of caramels is \$1.84, how many caramels are in the bag?
 A. 20
 B. 22
 C. 34
 D. 24
 E. none of the above
- If Shan and a few friends went to a restaurant and had a bill totalling \$19.66, what would be the amount of a 15% tip (estimation)?
 A. \$1.50
 B. \$2.25
 C. \$3.00
 D. \$4.00
 E. \$4.25

Consumer Math, Cont'd.

9. A pound of beef costs \$1.03 per pound. The best estimate of the cost of $5\frac{3}{4}$ pounds of beef is _____.

A. \$5
B. \$6
C. \$7
D. \$10
E. \$12

10. Tom wants to make 8 cups of punch. The recipe calls for 1 cup of concentrated punch mixed with 3 cups of water. Which proportion could be used to determine the number of cups of concentrate to make 8 cups of punch?

Hint: 1 cup concentrate - 3 cups water = 4 cups punch

A. $1:4 = 3$ c. punch
B. $1:4 = 4$ c. punch
C. $2:6 = 8$ c. punch
D. $1:3 = 8$ c. punch
E. none of the above

11. The directions on a can of concentrated juice state to mix 1 can of concentrate with 3 cans of water. How many cans of water should be mixed with 3 cans of concentrate?

A. 1
B. 3
C. 6
D. 9
E. none of the above

12. Derahni's sister weighed 90 pounds six months ago. Now she weighs 99 pounds. What percent of her original body weight did she gain over 6 months.

A. 1%
B. 6%
C. 9%
D. 10%
E. none of the above

13. How many different types of pizza can be made with 1 meat, 1 vegetable, and 1 item from the "Other Toppings" list?

Pizza Toppings		
<u>Meat</u>	<u>Vegetables</u>	<u>Other Topping</u>
Hamburger	Bell Peppers	Mushroom
Canadian Bacon	Onion	Pineapple
Pepperoni	Green Olives	
Sausage		

A. 9
B. 10
C. 12
D. 21
E. 24

14. Gina works at a grocery store. Gina can safely carry 20 pounds at one time. Each box of fruit weighs 8 pounds. Which inequality could be used to find N, the number of fruit boxes that Gina can safely carry?

A. $8 + N \leq 20$
B. $8N \leq 20$
C. $20/N \leq 8$
D. $8/20 \leq N$
E. $20/8 \leq N$

Consumer Math

Answer Key

1. C — Convert weights to ounces; total ounces; convert to pounds
2. D — $9/5 \times 205^{\circ} \text{C} + 32$, or $(9/5 = 1.8) \times 205 + 32 = 401^{\circ}$ or approximately 400°F
3. E — $1 \frac{3}{4} + 1 \frac{3}{4} = 3 \frac{1}{2} \text{ c. flour}$
4. A — $4 \frac{1}{2} \div 1 \frac{1}{2} = 3 \text{ cans fruit}$
5. B — $\$225 \div 1/5 = \45.00
6. C — $\$6.00 \div \$1.20 = 5 \text{ lbs. apples}$
7. E — $\$1.84 \div \$0.08 = 23 \text{ caramels}$
8. C — $\$19.66 \times 15\% (.15) = \2.95 or $\$3.00$ tip
9. B — $\$1.03 \times 5.75 = \5.92 or approximately $\$6.00$
10. C — If ratio of 1:3 = 4 cups punch, then ratio of 2:6 = 8 cups punch
11. D — If ratio of 1:3 makes the juice, then 9 cups water would be used for 3 cans of concentrate.
12. D — $9 \text{ lbs (gain)} \div 90 \text{ lb. (original weight)} = 10\% \text{ gain}$
13. E — $4 \text{ meats} \times 6 \text{ variations for each meat} = 24 \text{ types of pizza}$
14. B — 8 N (number of boxes) must be less than or equal to 20 lbs., so $8N \leq 20$ is the correct response.

Meal Planning on a Budget

Factors Affecting the Family Food Budget

- Geographic area of residence
- Number in family
- Ages and activities of family members
- Home food production
- Food storage facilities
- Income level
- Food preferences of family members
- Increase of dual-income families
- Number of meals eaten away from home



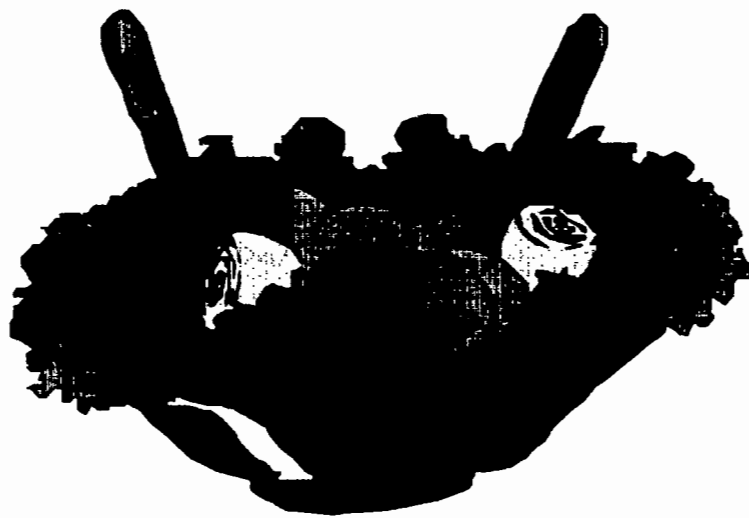
Strategies for Meal Planning on a Budget

- Plan menus based on weekly supermarket specials.
- Comparison shop for food items.
- Use coupons.
- Buy generic or store brands when acceptable for purpose.
- Plan menus around fruits and vegetables in season.
- Use meat extenders.
- Purchase shelf-stable food items in larger quantities if less expensive per unit.
- Purchase bread and bakery products at bakery thrift stores.
- Avoid impulse buying.
- Avoid shopping when hungry.
- Avoid shopping with children, if possible.

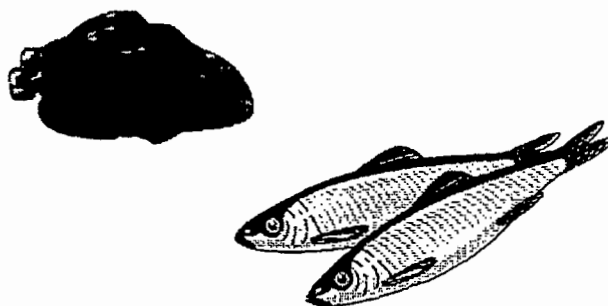
Adding **VARIETY** to Meals

▲ To add variety to meals and increase eye appeal and palatability, consider these five factors in menu planning:

- color
- size and shape
- texture
- temperature
- flavor



Ways to Lower Fat and Cholesterol in the Diet



- ✓ *Select more poultry, fish, dried beans and peas, and lean meats for protein.*
- ✓ *Use eggs, liver, and shellfish in moderation.*
- ✓ *Limit butter, cream, hydrogenated margarine, shortening, coconut oil, and foods made with these products.*
- ✓ *Trim fat from meats.*
- ✓ *Roast, boil, bake, or broil rather than fry.*
- ✓ *Read labels to determine the amount and types of fat in foods.*

Create Low-Fat Menus

Directions: Revise the following menu to lower the fat content. Menu items may be replaced with other foods, or food preparation methods may be changed.

Morning Meal

1 bagel with cream cheese
2 slices of bacon
chocolate milk

Revised Morning Meal

Noon Meal

3 slices of pizza
(sausage, olives, extra cheese)
1 slice of cheesecake
milk shake

Revised Noon Meal

Evening Meal

steak
fried potatoes
salad with dressing
dinner roll and butter
ice cream sundae with whipped cream
whole milk

Revised Evening Meal

Snacks During The Day

dry roasted peanuts
cheese and crackers
banana nut bread
potato chips

Revised Snacks

Ways to Reduce *Sugar* Consumption in the Diet

- ◆ Serve fresh fruits and vegetables as snacks rather than candy and cookies.
- ◆ Limit the number of snack foods and beverages with sugar.
- ◆ Use spices for flavor instead of sugar.
- ◆ Read labels to determine sugar content.
- ◆ Eat more vegetables and fruits (either fresh, frozen, or canned in its own juice rather than syrup).
- ◆ Limit the amount of sugar added to foods.



Create Low-Sugar Menus

Directions: Revise the following menu to lower the sugar content. Menu items may be replaced with other foods, or food preparation methods may be changed.

Morning Meal 2 glazed doughnuts filled with jam fruit drink	Revised Morning Meal
Noon Meal candy bar cola	Revised Noon Meal
Evening Meal glazed ham candied sweet potatoes canned corn fruit cocktail root beer	Revised Evening Meal
Snacks During The Day gumdrops cake with frosting sugar cookies sugar-syrup coated popcorn	Revised Snacks

Create Low-Sodium Menus

Directions: Revise the following menu to lower the sodium content. Menu items may be replaced with other foods, or food preparation methods may be changed.

Morning Meal

2 fried eggs
2 slices of bacon
2 pieces of toast
orange juice

Revised Morning Meal

Noon Meal

chicken noodle soup
1 large pickle
saltine crackers
apple
carbonated beverage

Revised Noon Meal

Evening Meal

meat loaf
spinach
deviled eggs
dinner roll and butter
bread pudding
buttermilk

Revised Evening Meal

Snacks During The Day

banana
crackers and cheese spread
apple pie

Revised Snacks

Green Beans Improve with Advanced Breeding

The ordinary bean is packed with food value and subtleties of flavor. Indeed, fans of the slim, green, yellow and purple pods will argue at length over which has the "beaniest" flavor.

The green bean is one vegetable that has been improved with modern breeding. Earlier versions had to be picked at the right moment to be enjoyable. Often stringy, they become tough and dry if left too long on the vine. Eaten at the right moment, string beans did have a distinctive flavor, a satisfying blend of the fresh, crispy, pea-like taste of the pod with the deeper taste of the embryonic bean seed forming inside.

Today's snap beans have little of the stringiness of old varieties. They mature just as quickly — some are even more precocious — and hold their texture and flavor on the plant much longer. Although such advances in plant breeding often mean a lessening of taste, many modern varieties have retained the legume's beloved taste. Bean enthusiasts have another reason to rejoice: Exotic varieties have entered the American garden market, bringing new subtleties of flavor in this favorite summer vegetable.

The Italian flat beans (Romano) are wide and sometimes thick, even at the earliest stages of maturity. Popular in Mediterranean dishes such as salade nicoise and minestrone, the flat Italian bean boasts a rich, buttery flavor, unlike its American or French-bred counterparts. Because of their large size and shape, Romanos typically are sliced diagonally when they are prepared. Romanos come in green and yellow. Like all beans, they are sown directly into the garden soil from seed; they mature quickly — typically beans can be harvested from bush plants as early as six weeks after sowing.

French filet beans have become popular. These slender, round, delicate-looking pods rarely grow more than a few inches long and are past their prime if they get as fat as a ball-point pen. Gourmet gardeners grow filets for their beauty and delicacy but not usually for their flavor. The comely French filet is sweetly bland — a good choice for salad platters but less appropriate for more robust uses.



American tastes gravitate toward the great Blue Lake and Kentucky Wonder beans, the two most popular varieties in this country. They were grown in large farm gardens, where climbing "pole" versions of the two types clambered on tall supports.

Since 1962, when a bush version of Blue Lake, the most popular of the two was developed, backyard gardeners have embraced it. It grows three feet high and sets prodigious amounts of richly flavored pods. This single variety represents about one-quarter of all bean-seed sales in this country. Recently, Kentucky Wonder and Blue Lake were crossed into a terrific-testing bean that is borne on climbing vines.

Generally, bush beans are better suited to home gardens than vining versions. Many home gardeners find building supports for climbing beans to be labor intensive, or are concerned that trellises will be ugly. In addition, bush beans mature faster than pole varieties and are ready to pick in two months or less. This gives you the opportunity to sow successive crops of different varieties.

Vining or bush types taste the same, but the color of the bean does seem to be related to taste. Purists will say that the most flavorful are green-skinned. Indeed, the striking purple-podded bean, which also comes in both a bush and pole form, is very pleasant but cannot compete in intensity of flavor with the legendary Blue Lake. Yellow wax beans, so named for their smooth skin, are delicate as eggshells in hue and their flavor wonderfully melting, but, again, they would lose in a comparison test to Italian Romano beans, whose butter richness is unsurpassed.

Name _____

Class Period _____

Reading Assessment

1. Read the article "Green Beans Improve with Advanced Breeding," very carefully. As you read, highlight or underline the important information.

2. Using the information in the article, write one (1) question beginning with the word *Who*.

(1) Who _____

Answer: _____

3. Using the information in the article, write two (2) questions beginning with the word *What*.

(1) What _____

Answer: _____

(2) What _____

Answer: _____

4. Using the information in the article, write one (1) question beginning with the word *Where*.

(1) Where _____

Answer: _____

5. Using the information in the article, write two (2) questions using the word *When*.

(1) When _____

Answer: _____

(2) When _____

Reading Assessment, Cont'd.

Answer:

6. Using the information in the article, write one (1) question beginning with the word *How*.

(1) How _____

Answer:

7. Using the information in the article, write two (2) questions beginning with the word *why*.

(1) Why _____

Answer:

(2) Why _____

Answer:

8. Select and define three (3) good vocabulary words from the article.

(1)

(2)

(3)

***Be sure that your questions and answers are relevant!**

KITCHEN SAFETY TIPS



To Avoid Burns:

- Use pot holders to grab hot pan handles and remove food from the oven.
- Turn handles of pots and pans inward but not directly over other burners.
- When stirring, steady the pan by holding the hand with a pot holder. Avoid stirring with a metal spoon that gets very hot when left in a pan on the range.
- Tilt and lift covers of hot pans away from you to prevent burns from steam.
- Put out grease fire on your range by putting a lid on the pan, pouring salt or baking soda on the fire, and turning off the range. Don't throw water on a grease fire.
- Keep matches in a closed container in a safe place.

To Avoid Cuts and Falls:

- When cutting food, always cut away from yourself.
- Dry hands before handling equipment.
- Use a step stool or sturdy chair for reaching high shelves.
- Store heavy items (such as mixing bowls or casserole dishes) where they can be easily reached. on high shelves they can be easily dropped as you stretch to reach them.
- Wipe up spills on the floor right away.
- Close cupboard doors or drawers to avoid painful bumps.

To Avoid Electric Shock:

- Plug in and unplug electric appliances with dry hands.
- Keep electrical cords away from the sink.

General Guidelines:

- Keep drawers and cupboard doors locked or tied shut if you have small children. They can easily be injured by knives and other dangerous items in the kitchen.
- Do not store cleaning products under the sink if you have small children in your home. Keep them out of children's reach in a securely fastened cabinet.
- Keep a small fire extinguisher in the kitchen and easily accessible.

Laboratory Experiment: Food Safety and Sanitation

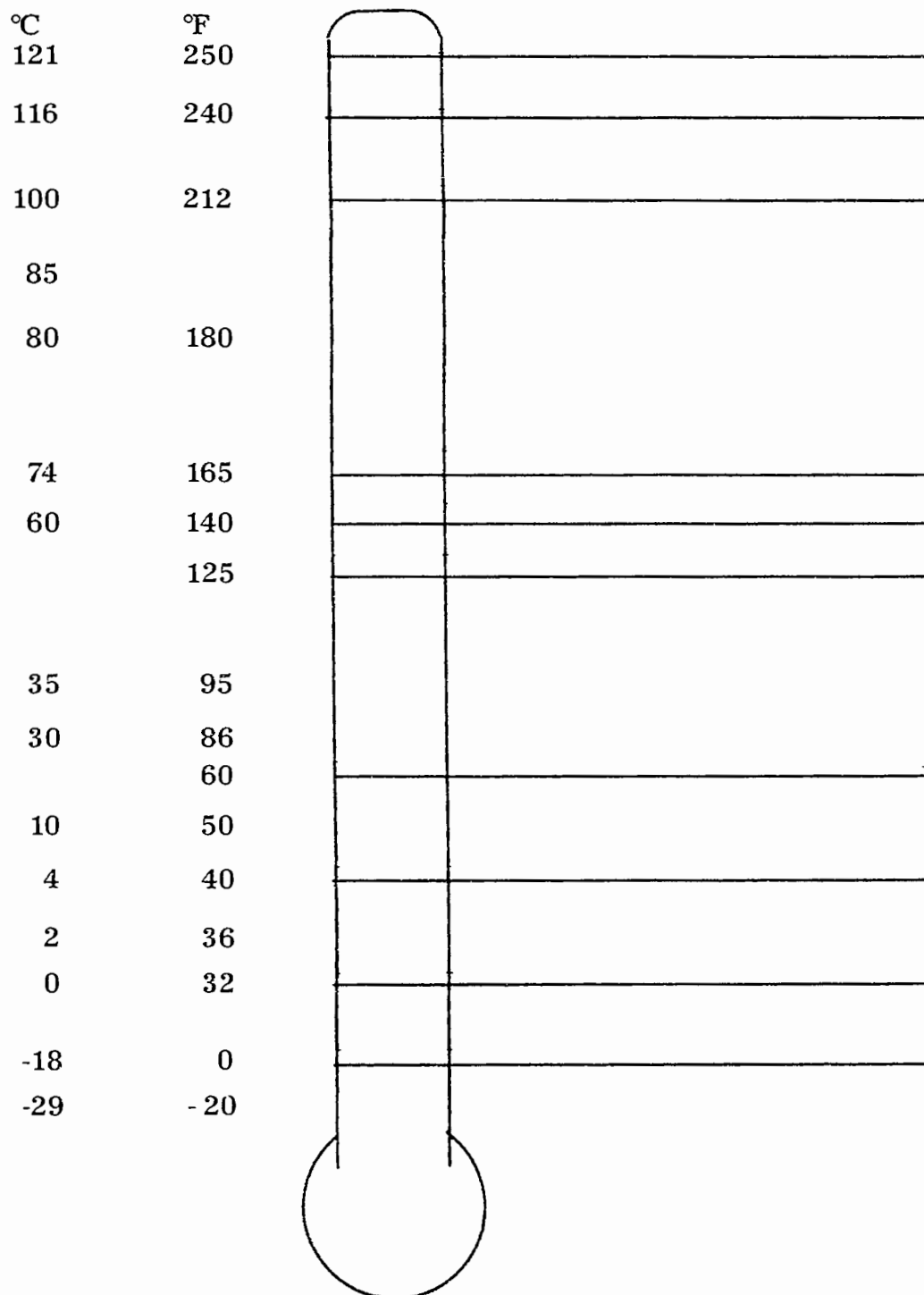
Instructions: Collaborate with a science teacher on conducting an experiment or experiments that demonstrate the importance of safe food handling.

▲ This experiment should grow colonies of microorganisms using agar in petri dishes. The dishes can be inoculated with microorganisms from such surfaces as table surfaces, utensils before and after washing, unprepared or unwashed food, coughs, saliva, hair, money, a telephone, and fingernail scrapings. Make sure that safety precautions are utilized in preparation and examination of the dishes. For example, pathogenic bacteria sometimes multiply in petri dishes. The substance can be dangerous. Insist that no culture be examined without supervision. After the experiment has been completed, lead students to discuss the importance of safe food handling. As a follow-up activity, have students compose a pamphlet recommending safe food handling practices.

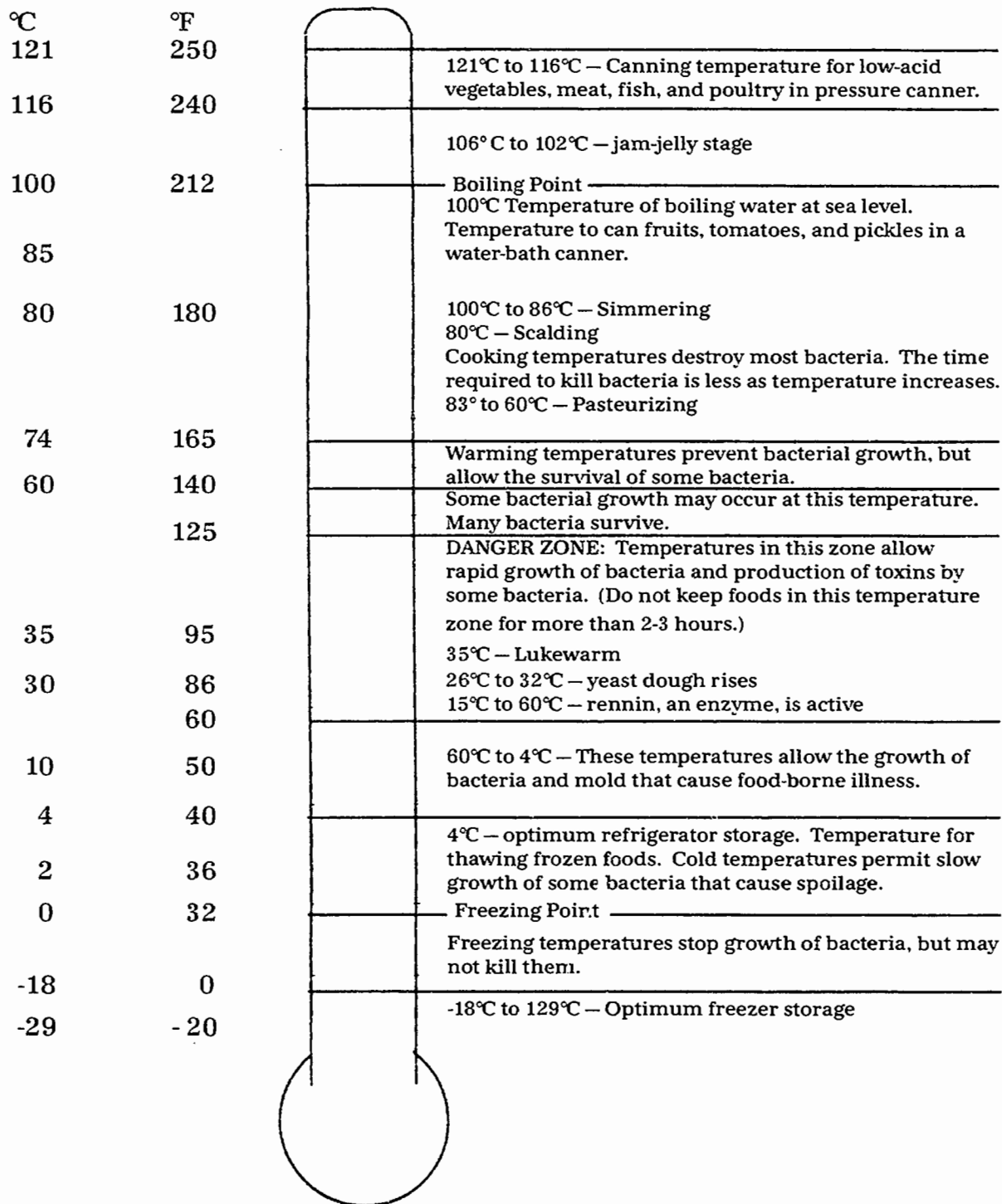
Questions

- Which growth was the most surprising?
- Which growth was expected?
- Did any petri dish not grow microorganisms? Why?
- What are the consequences of unsanitary practices in the home? in the school laboratory?

Temperature of Food for Control of Bacteria Worksheet



Temperature of Food for Control of Bacteria



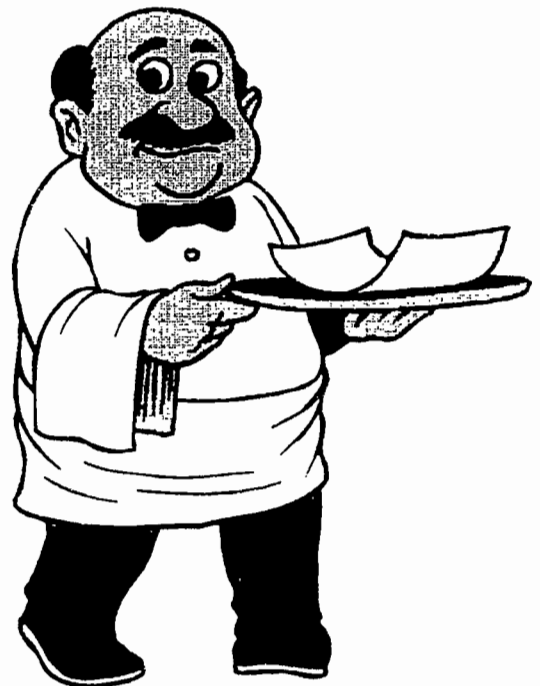
Food Storage

Directions: Use resources to identify and list ten foods for each column, leaving spaces under each. Write a description of the appropriate storage principle under each food. Example: Cheese: Wrap tightly and refrigerate.

Short-term Storage	Medium-term Storage	Long-term Storage
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.
5.	5.	5.
6.	6.	6.
7.	7.	7.
8.	8.	8.
9.	9.	9.
10.	10.	10.

Rules for Personal Hygiene and Sanitation in the Food Laboratory

1. Wash your hands thoroughly with soap and warm water. It is the number one rule in disease prevention. Dry your hands on paper towels.
2. Avoid touching your face, hair, skin, or unsanitary objects.
3. If your hands have open cuts or sores, wear plastic gloves or do not work with food preparation or food service tasks. Likewise, do not work in the kitchen if you are ill.
4. Repeat hand washing as often as necessary, but especially after coughing, sneezing, or using the toilet.
5. Hair should be clean, and long hair should be put up or tied back.
6. Clothing should be clean; avoid jackets, long, loose sleeves, or dangling jewelry.
7. Wear a clean apron during all food preparation and clean up tasks.
8. Use only clean towels and dishcloths in the food laboratory; obtain a clean supply at the beginning of the class period.
9. Wash and dry all tables and countertops at the beginning and ending of each laboratory experience.
10. When tasting food, use a clean spoon, not the stirring spoon. A clean spoon should be used every time the food is tasted and for every person tasting the food.



Rules for Cleanliness in Food Preparation Areas

1. Keep the food preparation area clean.
2. Always use **clean** utensils, bowls, and other food preparation equipment.
3. Never use dish towels to wipe spills, the floor, or for anything other than drying dishes. Use paper towels for drying hands.
4. Wash and dry dishes properly using the following techniques:
 - a. Scrape all garbage from dishes and place in proper containers.
 - b. Rinse to remove small food particles and sauces.
 - c. Stack dishes properly. Put all silverware together. Put like dishes together, such as dinner plates, saucers, bowls, etc.
 - d. Fill sink with **hot** soapy water.
 - e. Wash dishes in this order: glassware, silverware, dinnerware, pots and pans, skillets.
 - f. Change dishwater if needed.
 - g. Rinse dishes in **hot** water.
 - h. Dry with a clean towel and put away.
5. Keep large appliances clean inside and out.
6. Floor should be kept clean by frequent mopping.
7. Promptly refrigerate leftovers in clean, covered containers.
8. Do not let food spoil in the refrigerator.
9. Wipe or wash lids, caps, and the outside of bottles and jars before putting back in the refrigerator.
10. Never taste food that might be spoiled. Throw it away.
11. Keep trash cans clean. Periodically wash with hot soapy water, rinse, and let air dry.
12. Use plastic or glass cutting boards instead of wooden ones to eliminate danger of bacterial contamination from one food product to another.
13. Do not use food if the can is bulging.
14. Never store food under the sink.
15. Occasionally clean behind the stove and refrigerator and wipe off cabinet shelves.

Prevention of Accidents and Injuries

To Prevent Cuts

1. Use a cutting board when using a knife. Hold food and knife in such a way that you will not cut your finger if the knife slips.
2. When washing a knife, hold it so the blade is away from the hand that is holding the dish cloth or towel. Always hold onto the knife while it is in the dishwasher.
3. Do not store knives loose in a drawer. Use a special compartment, knife holder, or knife rack.
4. Never use a knife as a can opener.
5. When loading the dishwasher, do not point knife blades upward. It is better not to put sharp knives in the dishwasher.
6. Use a vegetable peeler instead of a knife for peeling vegetables such as carrots and potatoes. Push peeler away from you.
7. In case of broken glass, sweep up all the pieces immediately. Use a damp paper towel to pick up tiny pieces.
8. Keep your fingers away from the beaters in mixers and the blades in other small kitchen appliances.
9. When opening cans, cut the lid completely off.

To Prevent Burns

1. Point pot handles inward but not over another hot burner.
2. When removing a lid from a pan, tilt the lid so that the steam goes away from you.
3. Always use a dry potholder (never a dish towel) to pick up hot objects.
4. When turning meat in the frying pan, hold the lid in front of you as a shield against popping grease.
5. When deep fat frying, have grease at least 4 inches below the top of pan to prevent boil-over.
6. Tighten loose pot handles.
7. Do not fill a pan so full that it will boil over.
8. When removing a pan from the oven, pull the oven rack out. Do not reach into a hot oven.
9. Keep flammable materials away from the range and away from portable appliances that get hot. Use a metal trash can when disposing of hot or smoldering items.
10. When lighting gas burners with a match, strike the match first, then turn on the burner.
11. If you smell gas, turn off all range and oven controls and tell your teacher.
12. Use baking soda, not water, to put out a grease fire.
13. Keep a fire extinguisher handy at all times and know how to use it in case of an emergency.
14. Carefully remove lids and plastic wrap from microwave dishes to avoid burns from the steam.

To Prevent Falls

1. Use a stool or step ladder to reach something on a high shelf.
2. Immediately wipe up any liquids spilled on the floor.
3. Close cabinet doors and drawers after opening them.
4. Pick up objects that are dropped on the floor.

FOOD PREPARATION TERMS



Bake

Barbecue

Baste

Batter

Beat

Blanch

Blend

Boil

Braise

Bread

Broil

Brown

Chop

Coat

Combine

Cream

Cube

Cut

Cut in

Deep fry

Dice

Dilute

Dissolve

Dough

Dredge

Dust

Flake

Fold

Fry

Garnish

Glaze

Grate

Grease

Grill

Grind

Julienne

Knead

Marinate

Mince

Mix

Pan-broil

Pan-fry

Parboil

Pare

Peel

Pinch

Poach

Purée

Reconstitute

Rehydrate

Roast

Sauté

Scald

Sear

Simmer

Steam

Steep

Stew

Stir

Stir fry

Strain

Toast

Whip

Standards of Measurement

Part A. Abbreviations

Directions: Most recipes use symbols and abbreviations for units of measurement. For each symbol or abbreviation given below, write out the word or words it stands for.

- | | |
|--------------|---------|
| 1. T or Tbsp | 6. gal. |
| 2. t or tsp | 7. oz. |
| 3. c | 8. lb. |
| 4. pt. | 9. f.g. |
| 5. qt. | 10. L |

Part B. Equivalents

Directions: In food preparation, it is important to apply the standards of measurement. Complete each of the following by placing the correct answer in the blank.

- | | |
|--------------------------------------|---|
| 11. 1 T = _____ tsp. | 21. 1/4 cup = _____ fluid ounces |
| 12. 1 cup = _____ tablespoons | 22. 2 tablespoons = _____ fluid ounces |
| 13. 1 cup = _____ fluid ounces | 23. 75 tsp. = _____ T |
| 14. 1 pound = _____ ounces | 24. 1 pt. = _____ fluid oz. |
| 15. 1 gallon = _____ quarts | 25. 1/2 lb = _____ oz. |
| 16. 1 quart = _____ pints | 26. 12 fluid oz. = _____ cup(s) |
| 17. 1 cup = _____ teaspoons | 27. 40 oz. = _____ lb. |
| 18. 1 gallon = _____ cups | 28. 2 qt. = _____ T |
| 19. 1/2 tablespoon = _____ teaspoons | 29. 1/4 cup = _____ T |
| 20. 1 quart = _____ cups | 30. 1 stick of margarine = _____ cup(s) |

Directions: Double the following ingredients for a recipe using the space to the right of the ingredients.

- | | |
|-------------|---------------|
| 31. 1 1/2 | cups flour |
| 32. 2 tsp. | baking powder |
| 33. 1 1/2 T | sugar |
| 34. 1 | egg |
| 35. 3/4 cup | milk |
| 36. 3 T | oil |

Directions: Match the following measurements in Column A with their equivalents in Column B. Write the correct equivalent in the space provided.

Column A

Column B

- | | |
|------------------------------|----|
| 37. 1/4 cup = _____ T | 4 |
| 38. 1 cup = _____ T | |
| 39. 2 oz. = _____ T | 12 |
| 40. 1 T = _____ tsp. | |
| 41. 1/4 cup = _____ tsp. | 3 |
| 42. 1/2 cup = _____ fl. oz. | |
| 43. 1 1/2 pt. = _____ cup(s) | 16 |
| 44. 1/3 cup = _____ tsp. | |
| 45. 3/4 cup = _____ T | |

Standards of Measurement Answer Key

1. tablespoon	27. 2 1/2
2. teaspoon	28. 4
3. cup	29. 4
4. pint	30. 1/2
5. quart	31. 3 c
6. gallon	32. 4 tsp.
7. ounce	33. 3 T
8. pound	34. 2 eggs
9. few grains	35. 1 1/2 c
10. liter	36. 6 T
11. 3	37. 4
12. 16	38. 16
13. 8	39. 4
14. 16	40. 3
15. 4	41. 12
16. 2	42. 4
17. 48	43. 3
18. 16	44. 16
19. 1 1/2	45. 12
20. 4	
21. 2	
22. 1	
23. 25	
24. 16	
25. 8	
26. 1 1/2	

Can You Read a Recipe?

Part A

Directions: Read the following recipe, and answer the questions that follow.

Blonde Brownies

2 cups all-purpose flour
2 teaspoons baking powder
1/4 teaspoon salt
1/2 cup butter or margarine
2 cups brown sugar
2 eggs
1 teaspoon vanilla
1 cup chopped nuts, optional



Grease a 12 x 9 x 2 - inch baking pan. Combine flour, baking powder, and salt; set aside. Melt butter; remove from heat. Stir in sugar. Add eggs and vanilla; stir until combined. Stir dry ingredients and nuts into sugar mixture. Spread in pan. Bake in a 350° oven for 20 to 25 minutes. Makes 48 brownies.

1. What utensils or small kitchen equipment will be needed?
2. At what temperature should the food be baked?
3. How long does the food bake?
4. How many servings will this recipe make?

Can You Read a Recipe? — Cont'd.

Part B

Directions: Read the recipe for Banana Nut Bread. Then follow the instructions below.

Banana Nut Bread

1 3/4 cups all-purpose flour	1/3 cup shortening
1 1/4 teaspoons baking powder	2 eggs
1/2 teaspoon baking soda	1 Tablespoon milk
3/4 teaspoon salt	1 cup mashed ripe bananas
2/3 cups sugar	1/4 cup chopped nuts

Stir together flour, baking powder, soda, and salt. Set aside.

In a mixer bowl, beat sugar and shortening with electric mixer until light. Scrape the sides of bowl often. Add eggs, one at a time, and the milk, beating until smooth after each addition. Add the flour mixture and banana alternately to the creamed mixture, beating until smooth after each addition. Fold in nuts.

Turn batter into a lightly greased 8 x 4 x 2 - inch loaf pan. Bake in a 350° oven for 60 to 65 minutes or until a wooden pick inserted near the center comes out clean. Cool in pan 10 minutes. Remove from pan; cool. For easier slicing, wrap and store overnight. Makes 1 loaf.

-
1. Place parentheses () around each ingredient of this recipe.
 2. Place brackets [] around the amount needed for each ingredient.
 3. Underline what product will be made if this recipe is followed.
 4. Circle the cooking instructions for this recipe.
 5. Place a square around the directions.
 6. Place a zigzag line under the first thing you are to do when beginning to put the ingredients together.
 7. Place a curvy line over the amount this recipe makes.
 8. Place a double line ==== under each ingredient that should be measured in a liquid measuring cup.

Tips for Teachers: Laboratory Experiences in Nutrition and Food Science

- 1) The instruction which students receive in the nutrition and food science course may be the only formal education they will ever have in nutrition and food science. Plan for essential learning experiences.
- 2) Instruction in nutrition should be a part of each experience planned for nutrition and food science classes. Laboratory experiences should be used to build nutrition concepts and food preparation and management skills. These experiences should be interspersed throughout the course. The teacher should avoid separation of instruction in nutrition from that of food preparation.
- 3) Priorities for necessary principles which must be taught should be set before laboratories are planned.
- 4) Each laboratory experience should be evaluated in terms of the knowledge and skills which will be reached for each student who participates. For example, if four students are in a group and only one has the experience of kneading dough, then only one student will develop the skill of preparing dough properly. The other students missed the experience.
- 5) Students who enter a nutrition and food science class are very anxious to cook. Capitalize on that motivation! However, there are many interesting and exciting experiences with foods which do not involve cooking. Be enthusiastic about those as well. Nutrition concepts should be an integral part of every laboratory experience.
- 6) Integrate concepts which require short periods for development as multiple activities in the laboratory. For example, teach table manners along with food preparation and management.
- 7) Each member of a laboratory group should have some food preparation responsibility during each laboratory experience.
- 8) In deciding whether each laboratory group is to prepare the same product in a laboratory experience, be guided by the objectives for the class. If the objectives are to develop a specific principle, then each group must prepare the same type of food. If the objective is to see variety available within a certain category, then different laboratory units may prepare different foods. For example, if one skill to be acquired is proper handling and preparation of salad greens, then each student group must prepare a green salad. If, on the other hand, the objective is to see variety in salads, then each group may prepare a different type of salad.
- 9) Demonstrate a food preparation technique before each laboratory experience. Remember, if students already know how to prepare a food, it should not be used as a laboratory experience. If students do not have the skill, a demonstration will better ensure their acquiring the skill. When giving a demonstration, provide each student with a copy of the instructions used.

Tips for Teachers: Laboratory Experiences in Nutrition and Food Science, Cont'd.

- 10) Food models are recommended for use in a variety of exhibits and learning experiences. These are available in cardboard models or in more expensive food facsimiles.
- 11) The teacher with a limited budget may include valuable experiences by practicing some of the following suggestions:
 - a) Have students prepare exhibits using food models instead of preparing actual foods to show nutrition concepts.
 - b) Use low cost foods when possible (e.g., cabbage slaw instead of tossed green salad, green beans instead of broccoli, meat patties instead of pork chops, plain cake instead of chocolate cake).
 - c) Demonstrate food preparation skills instead of having laboratories.
 - d) Have tasting events instead of food preparation laboratories.
 - e) Limit the number of laboratory experiences to those needed for developing only the basic nutrition and food science concepts.
- 12) Planning prior to the beginning of the course is absolutely essential for effective use of resources.
- 13) The major learning from laboratory experiences may well be the experiences which follow the laboratory. For example, after an experience of preparing a meal of convenience foods, the teacher should follow with activities similar to the following:
 - a) Show the contributions the foods make toward the daily nutritional needs of an average teenager.
 - b) Make a chart showing differences in cost, time, and energy of the convenience foods as compared to conventional foods.
 - c) Make recommendations for ways in which convenience foods may be included in a family's regular meal patterns.
- 14) Evaluations which follow laboratory experiences should be much broader than just checking for quality of product and efficiency in preparation.

Laboratory Duties

Directions: Fill in the names of the individuals assigned to each position. Positions will rotate with each laboratory experience. Turn this sheet in with your completed plan of work.

Cook 1

Name: _____

Job to be Done:

1. Get food for recipe.
2. Mix food.
3. Cook food.
4. Dispose of garbage.
5. Clean and check range.
6. Sweep floor.

Additional Duties:

Cook 2

Name: _____

Job to be Done:

1. Get out equipment needed.
2. Measure ingredients.
3. Prepare pans, if needed.
4. Help cook, if needed.
5. Wash dishes.
6. Clean sink (scrub and dry).

Additional Duties:

Cook 3

Name: _____

Job to be Done:

1. Get out Linens.
2. Do preparation tasks.
3. Collect and stack dishes.
4. Dry dishes.
5. Return dirty linens.

Additional Duties:

Manager/Safety Sanitation Coordinator

Name: _____

Job to be Done:

1. Get out tableware.
2. Help with preparation.
3. Set and clear table.
4. Clean counter and cabinets.
5. Put dishes away.

Additional Duties:

Laboratory Group Number : _____

Equipment Needed	Grocery Supplies Needed (List exact amounts)

Time Schedule

[illegible]

Laboratory Assessment (to be completed by each student)

Standards for Food Product Evaluation

Score	Standard (Determined by student)
_____	1. _____
_____	2. _____
_____	3. _____
_____	4. _____

▲ Evaluate your food product using the standards above. Include standards for flavor, color, shape, texture, and temperature. Use a rating scale from 3 to 1 with 3 as excellent and 1 as undesirable, placing the score in the left-hand column marked *Score*.

Rubric for Laboratory Experience

3	2	1
_____ Demonstrated good organizational skills; gathered supplies and equipment at one time; used dovetailing to accomplish tasks efficiently	_____ Demonstrated average organizational skills; several steps taken to gather supplies and equipment; used some dovetailing to accomplish tasks	_____ Demonstrated below-average organizational skills; gathered supplies and equipment one at a time; did not use dovetailing techniques
_____ Followed all cooking principles related to designated product	_____ Inconsistently followed cooking principles related to designated product	_____ Did not follow cooking principles related to designated product
_____ Demonstrated proper measuring techniques at all times	_____ Demonstrated proper measuring techniques but not consistently	_____ Did not demonstrate proper measuring techniques
_____ Demonstrated proper knife/safety skills	_____ Demonstrated proper knife/safety skills but not consistently	_____ Did not demonstrate knowledge of proper knife/safety
_____ Equipment/supplies returned to proper location; lab area cleaned to teacher specifications	_____ Returned some equipment/supplies to proper location; cleanliness of lab area needs improvement	_____ Equipment and supplies not returned to proper location; lab area left unclean

Reflection

▲ On the back of this sheet, list three changes you could make in your lab procedure to improve the product.

Commonly Used Substitutions

If the recipe calls for:	Substitute:
1 tsp double acting Baking Powder	1/4 tsp baking soda + 1/2 cup buttermilk <i>or</i>
1 tsp double acting Baking Powder	1/4 tsp baking soda + 1/2 tsp cream of tartar
1 cup Butter	1 cup margarine <i>or</i>
1 cup Butter	7/8 cup lard + 1/2 tsp salt
1 cup Buttermilk	1 Tbsp vinegar + sweet milk to make 1 cup
1 cup Buttermilk	2/3 cup plain yogurt + 1/3 cup sweet milk
1 ounce Chocolate	3 Tbsp cocoa + 1 Tbsp shortening
1 Tbsp Corn Starch (for thickening)	2 Tbsp flour
1 cup Cream	1/2 cup butter + 3/4 cup milk
1 whole Egg	2 egg yolks
1 cup all-purpose Flour	1 cup + 2 Tbsp cake flour
1 cup cake Flour	7/8 cup all-purpose flour
1 cup self-rising Flour	1 cup all-purpose flour + 1/1/2 tsp. baking powder + 1/2 tsp. salt
1 small clove Garlic	1/8 tsp garlic powder
1 Tbsp fresh Herbs	1 tsp dried Herbs
1 cup Honey	1 1/4 cups sugar + 1/4 cup liquid
1 cup Milk, whole	1 cup reconstituted dry milk + 1/2 cup water
1 cup Milk, whole	1/2 cup evaporated milk + 1/2 cup water
1 cup Milk, sour	1 Tbsp lemon juice or vinegar + sweet milk to make 1 cup
1 Tbsp instant, Minced Onion (rehydrated)	1 small fresh onion
1 cup Molasses	1 cup honey
1 Tbsp Mustard, prepared	1 tsp dry mustard
1 cup Ricotta Cheese	1 cup cottage cheese + 1 Tbsp skim milk
1 cup Sour Cream	1 cup yogurt
1 cup Sugar, Brown	3/4 cup granulated sugar + 1/4 cup molasses
1 1/3 cups Sugar, Powdered	1 cup granulated sugar
1 cup Yogurt	1 cup buttermilk

Chicken and Dumplings

1 chicken leg
1 chicken thigh
5 biscuits (canned) or 3-4 flour tortillas
1 can cream of chicken soup
1/2 onion (chopped)
1/2 cup milk
1/2 cup chicken broth
flour (small amount when rolling biscuits)
salt and pepper to taste

Directions: Check steps as completed and return this sheet to your teacher along with your lab assessment.

- _____ 1. • Wash hands.
 - Run dishwater (hot and soapy).
 - Get two dish towels and one dish cloth.
 - Put on aprons.
 - Wash countertops thoroughly.
- _____ 2. Cook chicken and cool. (Use one chicken leg and one chicken thigh.)
- _____ 3. • Lightly flour wax paper to roll the dumplings (biscuits).
 - Roll biscuits (5) until thin (one at a time), **or** use flour tortillas (3 to 4).
 - Cut the biscuits or tortillas in 1 inch strips.
- _____ 4. • Remove the chicken from the bone, and cut into bite size pieces. Discard skin and bones.
 - Place meat in pan, and add chicken soup, onion, milk, chicken broth, salt and pepper.
 - Heat to simmer.
 - Add biscuits — one strip at a time. Put lid on pan. Cook for 10 minutes.
If using flour tortillas, bring liquid to boil, add flour tortillas to pan, put lid on pan, and turn burner off. Do not remove lid for 10 minutes.
- _____ 5. Serve. (It is desirable that everyone should taste.)
- _____ 6. Complete clean-up on time.
 - Wash dishes.
 - Clean sink.
 - Wash counters.
 - Put dirty towels in basket.
 - Place aprons in correct place.

Chicken A la King

1 can (10 3/4 oz.) condensed cream of celery soup
1 cup cooked and cut-up chicken
1 Tbsp chopped pimiento
1 tsp Parsley flakes
1 can (4 oz.) mushrooms stems and pieces, drained
1/4 cup milk (optional)
Hot rice, chow mien noodles, biscuits, pastry shells, or toast points

- _____ 1. • Wash hands.
 - Run dishwater (hot and soapy).
 - Get two dish towels and one dish cloth.
 - Put on aprons.
 - Wash countertops thoroughly.
- _____ 2. Cook chicken, cool, debone, and cut into bite-sized pieces.
- _____ 3. Heat soup over medium heat. Stir in chicken, pimiento, Parsley flakes, and mushrooms. If mixture seems too thick, add milk slowly until desired thickness is achieved. Simmer for 5 minutes. Serve on hot rice, chow mien noodles, biscuits, pastry shells, or toast points.
- _____ 4. Serve. (It is desirable that everyone should taste.)
- _____ 5. Complete clean-up on time.
 - Wash dishes.
 - Clean sink.
 - Wash counters.
 - Put dirty towels in basket.
 - Fold aprons and place on counter top.

Name _____

Class Period _____

Table Etiquette

Directions: Answer the questions below concerning the accepted customs of behavior at the table. Underline the word or words that make the sentences read correctly.

1. In taking your place at the table, sit down from (**the right side of the chair**), (**the left side of the chair**), or (**either the right or left side of the chair**).
2. Sit comfortably at the table with your feet (**on the chair**), (**around the chair**), or (**on the floor**).
3. Begin to eat (**as soon as you are seated**), (**when everyone has been served**), or (**when you are served**).
4. (**Lots of Food**), (**Expensive food**), or (**A cheerful conversation**) adds to the enjoyment of a meal.
5. Food should be taken from (**the side of the spoon**), (**the tip of the spoon**), or (**either side of the tip of the spoon**).
6. While you are eating keep (**the elbows on the table**), (**one elbow on the table**), (**the elbows off the table**).
7. It is proper to (**talk with food in your mouth**), (**chew with your lips open**), or (**chew with your lips closed**).
8. After they have been used, keep the knife and fork (**on the plate**), (**on the table**), or (**either on the plate or on the table**).
9. Spoons are used for (**sipping beverages**), (**tasting beverages**), or (**eating mashed potatoes**).
10. When drinking water, hold the glass (**with both hands**), (**near the base**), or (**around the rim**).
11. When you pass your plate for a second helping, the silverware should (**be taken from your plate**), (**left on the plate**), or (**held in your hand**).
12. When bread is served at a meal (**butter a whole piece at a time**), (**cut a piece in half and then butter it**), or (**break off a small piece and butter it**).
13. Toothpicks should (**be on the table**), (**be passed**), or (**be used in private**).
14. Used silverware is (**sometimes placed on the tablecloth**), (**never placed on the tablecloth**), (**placed with the handles on the tablecloth**).
15. When food you dislike is served to you (**do not take it**), (**eat what you can**), (**tell the hostess/host you do not like it**).
16. It (**is proper**), (**is not proper**), or (**is sometimes proper**) to cut all the meat on your plate before starting to eat.

Table Etiquette, Cont'd.

17. In using a soup spoon, dip the spoon (**toward the front of the bowl**), (**toward the back of the bowl**), (**either toward the front or the back of the bowl**).
18. When you have finished eating, place the knife and fork (**on the table**), (**on the plate**), (**either on the plate or on the table**).
19. (**Push your plate back**), (**Push your plate to one side**), (**Leave your plate in place**) when you have finished eating.
20. At the close of the meal, place your napkin (**on the table**), (**on the chair**), or (**on your plate**).

Table Etiquette

Answer Key

1. the left side of the chair
2. on the floor
3. when everyone has been served
4. A cheerful conversation
5. the side of the spoon
6. the elbows off the table
7. chew with your lips closed
8. on the plate
9. tasting beverages
10. near the base
11. left on the plate
12. break off a small piece and butter it
13. be used in private
14. never placed on the tablecloth
15. eat what you can
16. is not proper
17. toward the back of the bowl
18. on the plate
19. Leave your plate in place
20. on the table

Name _____

Class Period _____

Restaurant Etiquette: Tipping

▲ Today, nearly one third of all meals consumed are eaten out. Some of the meals may be from “fast-food” restaurants. These restaurants offer fast service by which you order at a line and bring your food to the table yourself. Other restaurants, in which you are seated at a table and waited on by waiters and waitresses, offer a more leisurely service. The servers who wait on you receive a small salary, but usually a “tip” is the largest part of their pay. If you think the service is good, your tip should be between 15 and 20 percent of the bill. You should always check your bill to be sure it is correct.

1. Add the total bill of each of the restaurant checks below.
2. Determine the correct sales tax for your city.
3. Calculate a fifteen percent tip on each of the checks.

Guest Check #1

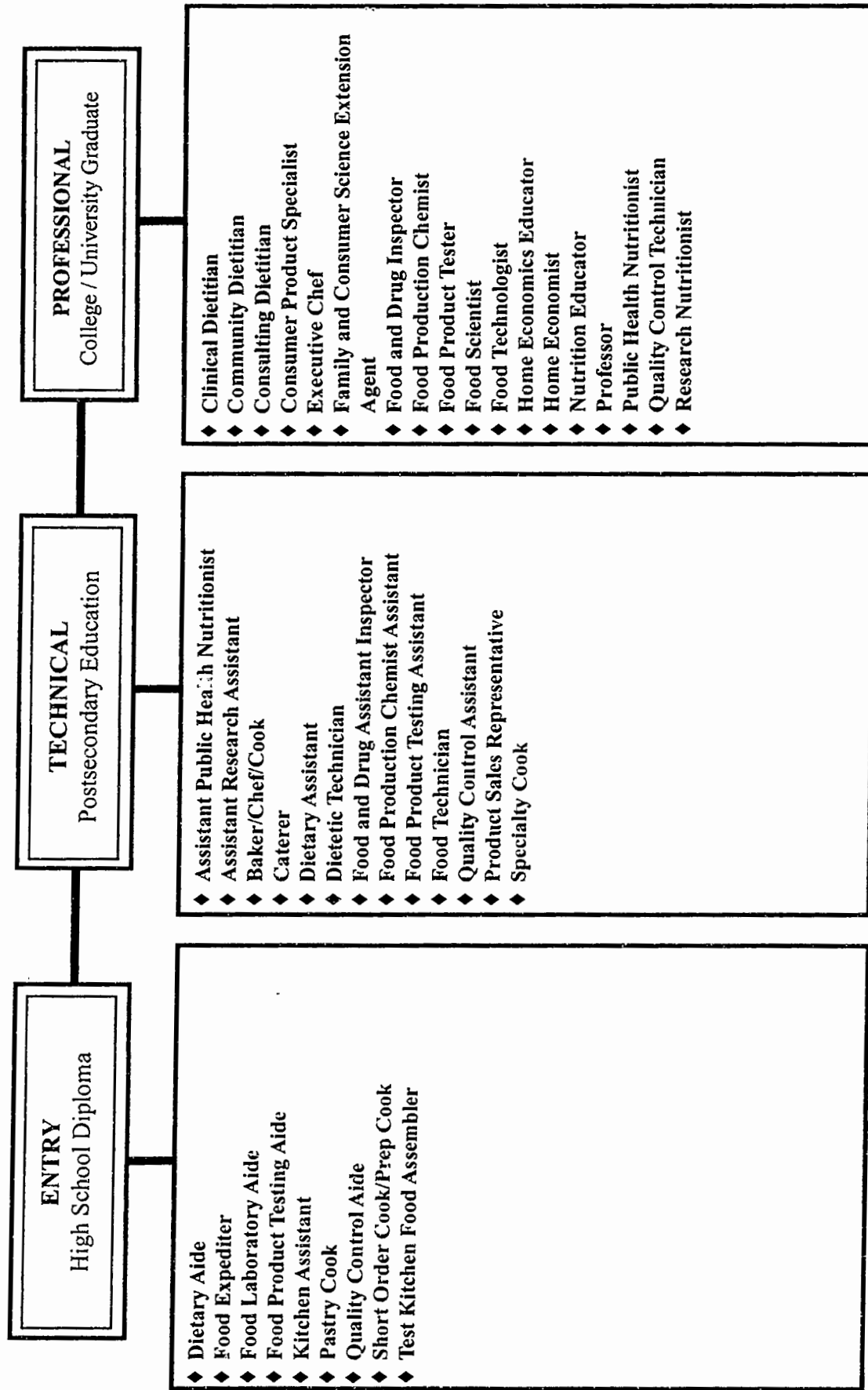
Green Salad	\$2.95
Roast Beef	\$7.95
Iced Tea	\$1.00
Cherry Pie	\$3.00
Subtotal	_____
Sales Tax	_____
Tip	_____
Total	_____

Guest Check #2

Broccoli Cheese	\$2.50
Soup	
Grilled Chicken	\$7.95
Iced Tea	\$1.00
Chocolate Fudge	\$3.50
Cake	
Subtotal	_____
Sales Tax	_____
Tip	_____
Total	_____

Career Concentration: Nutrition and Wellness/Food Science and Technology

Examples of Home Economics Career Opportunities



Mastering *Positive* Human Relations Skills

Attitude

A person's self-image, relationships with others, and success in achieving goals are influenced by his or her attitude. Attitude involves one's general manner or feeling toward a situation or person. A positive work attitude means thinking about the work in a favorable manner. It is most important in getting and keeping a job.

When a person exhibits a positive attitude and other positive human relations traits, goals are achieved more easily and stress is reduced. Having a negative attitude toward a particular situation or person causes problems to appear more serious than they actually are. A negative attitude can lead to problems in getting along with co-workers, supervisors, and clients or customers. A positive attitude helps an employee carry out job responsibilities effectively and encourages job satisfaction. Enthusiastic employees concentrate on the positive attributes of a job as well as the positive attributes of other people. Cooperation, loyalty, optimism, patience, respect, enthusiasm, interest, and willingness are traits that show a person has a positive attitude.

Having a positive attitude toward co-workers helps everyone get along better. The ability to get along with other people influences success in any job. A friendly,

sincere manner, willingness to do one's share of the work, and respect for the knowledge and skills of other employees help promote good relationships.

It also is important for an employee to develop an attitude of loyalty to his or her employer. A loyal employee follows the rules and policies of a business, and she or he is concerned with the quality of work and services provided.

A genuine interest in one's job is a quality every employee should develop. A positive attitude toward the employer, other employees, and the job helps a person deliver high-quality performance. There is no substitute for hard work in obtaining job success.

Personality

Personality is the visible aspect of one's character as it is presented to others. Some people may be described as having an outgoing personality and many seem to find it easy to talk with others and to be friendly. Other people may be described as being shy, and they may seem to find it difficult to carry on conversations. Being able to get along with different personality types is a desirable characteristic.

Personality traits create an image that projects to others. Personality traits include appearance, neatness, courtesy, manners, cheerfulness,

friendliness, ambition, cooperativeness, honesty, sense of humor, dependability, generosity, poise, truthfulness, tact, self-control, and ability to get along with others. These and a variety of other traits cause a person to be perceived by others as having a certain type of personality. Individuals with a pleasant personality can successfully establish good relationships with others.

Self-control

There are times when problems can occur and it may be difficult to remain calm. Self-control is the ability of an individual to restrict her or his own emotions and actions. A successful employee must try to avoid unpleasant confrontations with co-workers, supervisors, clients, customers, and other individuals.

An individual can develop self-control by maintaining a pleasant disposition. Pausing to think before speaking or taking action helps a person to maintain self-control. Learning to remain calm in difficult situations is an important trait for any employee. Working hard to perform well and obtain the respect of supervisors and co-workers makes self-control easier. Learning to accept constructive criticism and maintain self-control is important in relationships with others.

Mastering *Positive* Human Relations Skills, Cont'd.

Initiative

Initiative is the ability to think and act without being prompted. An employee with initiative is one who is willing and able to observe tasks that need to be done and complete them without being told to do so. A willingness to learn is also a sign of initiative. The employee who is eager to learn will ask about opportunities for growth and learning. Employers recognize initiative by giving increasing responsibility to those employees who show an interest in opportunities to learn new skills.

complete all assigned tasks with a positive attitude is another characteristic of a cooperative employee. Even if personality problems exist between two employees, it is important for both individuals to avoid petty differences and work together as well as possible. Willingness to cooperate with co-workers and supervisors without insisting on doing things a particular way contributes to a positive environment for everyone.

Honesty

Honesty means being trustworthy, fair, and sincere. Employers expect employees to show honesty by maintaining high ethical standards, telling the truth, and handling the employer's possessions with care. Dishonest behavior includes stealing from a company and using company property for personal use. The most common item employees steal from their employers is time. Employees who report to work late, take extra time at breaks and lunch, leave work early, make personal phone calls, remain idle, and visit with other employees are using time for personal use that should be spent working.

Cooperation

Cooperation involves willingness to listen to other people's views and opinions and to work toward common goals. Employees should become familiar with and follow the rules and policies of their employers. Willingness to

Outline for a Persuasive Letter

Writing Prompt (Topic statement or question):

Letter

Greeting _____ :

- I. State your position on the issue: (use should, must, or ought in this first sentence)

Give some background about your topic: (minimum of two sentences)

- II. Topic sentence (What general idea are you trying to propose?):

- A. (Reason #1)

(elaborate with examples, statistics, or personal experiences)

1. _____
2. _____

B. (Reason #2)

1. _____

2. _____

C. (Reason #3)

1. _____

2. _____

III. Conclusion: (Restate your position on this issue. Urge support for your position, and state a solution if possible.)

Terminating Employment

There are many reasons to **terminate**, or leave, a job. Sometimes employees have good reasons for leaving a job; however, often decisions to terminate employment are made hastily and without using sound judgement and decision-making skills. The decision to terminate a job should be made very carefully. When an individual decides to leave a job, he or she should try to leave on good terms with the employer.

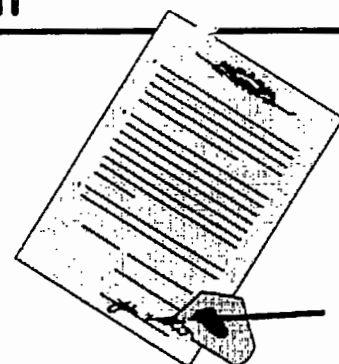
Guidelines for positive termination include the following:

- A notice of intent to leave a job should be given to the immediate supervisor.
- A letter of resignation (a written notice) is preferable and should be prepared if required by company policy.
- Notice of termination should be given soon enough for the employer to find a replacement by the time the job is vacated, if possible.
- It is customary to give at least a two week notice; a four week notice is preferable if paid once a month.
- It is important to keep copies of all correspondence related to employment and termination.

Writing a Letter of Resignation

Tips for writing a letter of resignation include the following:

- State the exact date which you expect to be your last day of employment.
- Thank the employer for his or her help during your employment with the company.
- Give a brief explanation of why you are leaving, unless it is not appropriate due to a dispute, disagreement, etc.
- Write the letter in a business format. Be neat and sincere.



What Would You Do?

You have been working at “Caprock Foods” for the last 18 months. You have been making \$6.00 per hour and working approximately 20 hours per week. A friend has just gotten a job at a similar, but new establishment called “Mustang Wholesale,” and will start at \$6.50 per hour — without experience. You would like to make more money, and this new establishment is closer to home and school, so you make an appointment for an interview. The interview occurs on Tuesday afternoon. The interview goes great because they have been looking for employees with experience and your abilities fit their needs exactly. On top of that, they will pay you \$7.50 per hour if you can start next Monday. You tell them you really want to take the job, but you have a commitment to your current employer, Caprock Foods, to give them the traditional two weeks notice. After all, you have worked there for 18 months and they have been very flexible with your schedule, holidays, and time off when you requested it. What do you do?

Name _____

Class Period _____

Ethical Practices in the Workplace

▲ Ethics are standards of professional conduct. As employees work, they become familiar with the general rules of conduct in the business world. Employees can maintain ethical standards by following the general policies and procedures of the employer and by remaining loyal, honest, objective, and nondiscriminatory. An ethical employee follows the rules of the establishment and the rules of confidentiality. Confidentiality means not sharing information about the business or its clients with someone outside of the business. Financial transactions should be kept in strict confidence. Failure to do so reflects poorly on the employee and on the business.

Instructions: Write your responses to the following. You may use the back of this sheet if more space is needed.

Part A

1. Give an example of a violation of professional ethics in the workplace other than those we have discussed in class.
2. How would this situation make you feel?

Part B

1. Give an example of someone exhibiting ethical standards in the workplace other than those we have discussed in class.
2. How would this situation make you feel?

Ethics on the Job

Case Study #1

Bobby has just accepted a new job at Plains Supermarket as a stocker. He has been there only one week, but he has already noticed how openly all of the employees talk about their managers - and it isn't complimentary. One night at work, two of the other employees stocking with Bobby began what Bobby thought was inappropriate "bashing" of the night manager and were talking rather loudly. What should Bobby do?

Case Study #2

Christina works at Old Town Cafe as a member of their wait staff. After serving a table of six very demanding customers, Christina gives them their ticket and moves to assist customers at another table. She can hear the six squabbling about who owes how much. She notices that they are putting money in the center of the table, taking some away, and so on, trying to settle the amount each owes. Christina goes about her work, and returns to their table after the six get up and head to the front of the restaurant. After the six paid their bill at the cash register, she notices they are standing in the lobby talking. As she clears their dishes, she picks up her tip, which is about 10 percent of their bill. As she leans down to pick up a dropped napkin from the floor, she notices a \$20.00 bill at the leg of one of the chairs. She assumes one of the customers must have dropped it during the ordeal of settling their bill. She picks up the bill and notices that the group is still in the lobby. What should she do?

The Relationship Between Nutrition, Health, and Wellness

Mary and Jenny are sisters. Both are high school students. Jenny, age eighteen, is a senior in high school and Mary, age sixteen, is a sophomore. They are very active in school functions and community activities. They need to make good grades in order to participate in band and basketball. They average approximately four to five hours of sleep a night; consequently, they do not get out of bed in time to eat a good breakfast. Jenny was sick and missed two days of school last week. Mary is catching a cold. They each missed five days of school during the first six weeks, and now it is the beginning of the second six weeks of school.

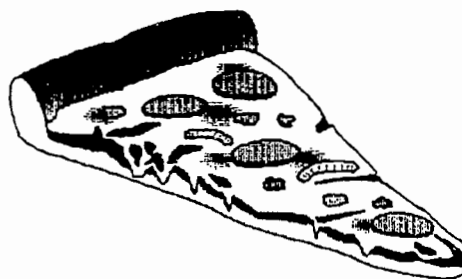
Mary and Jenny's food selections for a day:

Breakfast (on the run)

- Orange juice - 1 1/2 cups

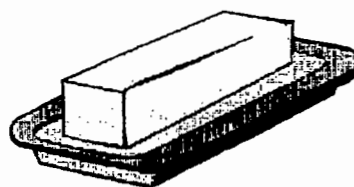
Lunch (at a pizza restaurant)

- Pepperoni pizza - 2 slices
- Cola drink - 1 glass with 2 refills

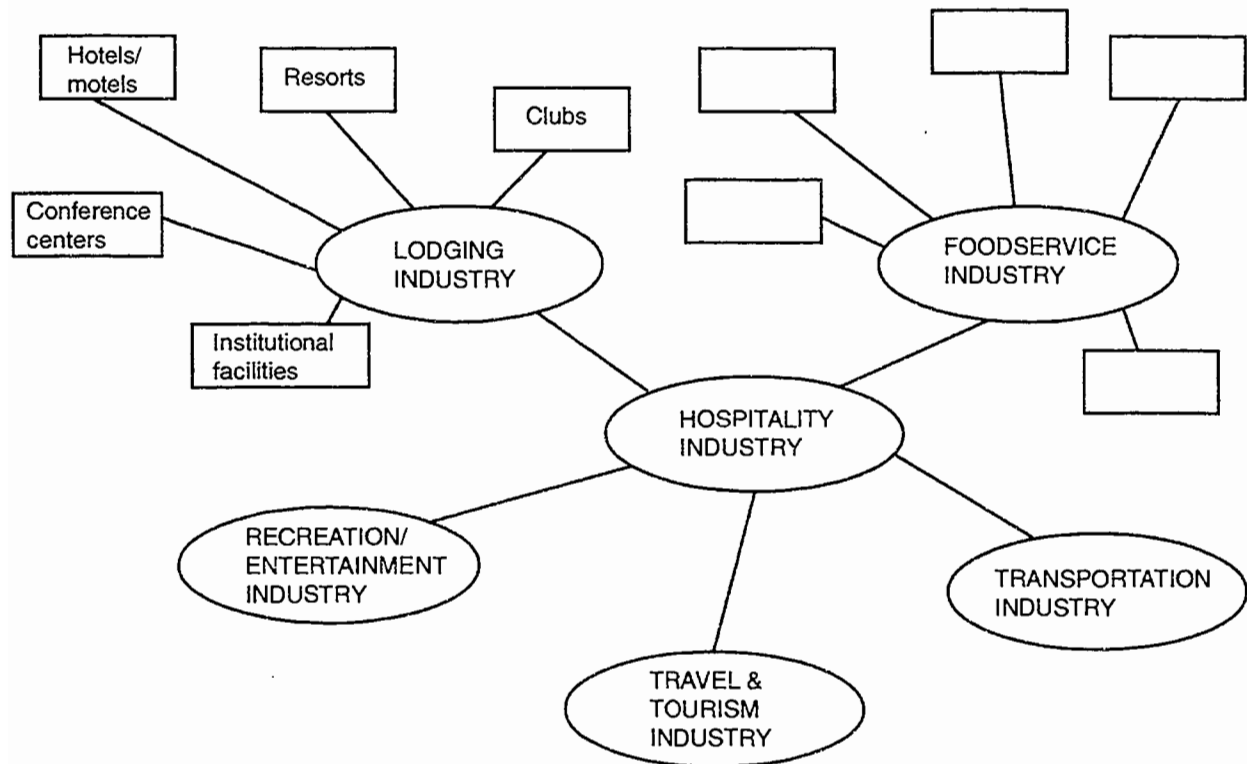


Supper (eaten at home)

- Broiled chicken - 1 piece
- Mashed potatoes - 1/2 cup
- Green beans - 1/2 cup
- 1 tsp. margarine (mashed potatoes)
- Iced tea



Web Diagram



GUIDELINES FOR A CLASSROOM DEBATE

Discussion, Disagreement, and Debate: What's the difference?

Discussion:

- People talking to reach conclusions, to give and receive information, or to express their ideas in an informal and unplanned manner.

Disagreement:

- A disagreement stems from a discussion when individuals' opinions, thoughts, and beliefs differ.
- Like a discussion, a disagreement is usually informal and unprepared.

Debate:

- Opposing viewpoints are presented in a balanced, well organized, and researched manner by individuals or teams to persuade others of their position.
- Participants must have evidence to support their viewpoint.
- A debate does not "prove" or "decide" an issue. The team that offers the strongest debate gives better information for their arguments and effectively addresses arguments from the opposing team.
- In a debate, teams do not "have" arguments, they "present" arguments.
- The team that is "for" the proposition is called the ***affirmative team***. The team that is "against" the proposition is called the ***negative team***.

Preparing and Conducting a Classroom Debate:

1. **Select a topic.**
2. **State a proposition.** A ***proposition*** is the statement of opinions, thoughts, or beliefs on a particular viewpoint.
3. **Select teams.** Select the affirmative and negative teams and a chairperson for each team.
4. **List arguments.** Each team should list their arguments, choose their four strongest arguments, and predict their opponent's four strongest arguments.
5. **Appoint speakers.** Team members can select speakers, or each team member can present one or more arguments.
6. **Research and prepare evidence.** Teams should research and prepare evidence supporting the arguments and prepare a summary statement. Information should not be shared with the other team.
7. **Rehearse the debate.** Teams should rehearse the debate, but the other team should not hear the rehearsal. Arguments should be covered from the least important to the most important.
8. **Conduct the debate.** Team members will state positions they feel are true and will take turns explaining why their position is right and the opponent's position is wrong. An equal number of people should speak in an established order for equal amounts of time.
9. **Present decision of audience.** An audience will listen to the debates and decide which team presented the strongest case for their team's arguments.

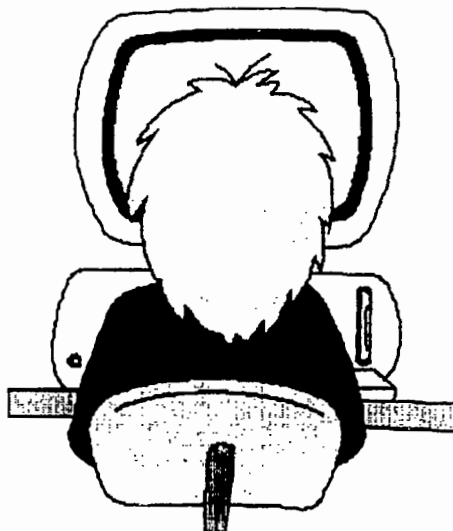
Internet Terminology

AUP	<i>Acceptable Use Policy</i> ; a written agreement signed by teachers, students, and parents outlining the terms and conditions of Internet use
Bookmarks	a list on your computer of your favorite Web pages
Browser	a special software program used to navigate the World Wide Web
Download	to copy information from another computer (Note: Upload means to send information to another computer.)
E-mail	Electronic mail; exchange of messages with people around the world over the Internet
FAQ	<i>Frequently Asked Questions</i> ; files containing common questions asked and their answers
Home Page	the first page you see when you start your Web browser
HTML	<i>Hypertext Markup Language</i> ; programming language used for creating Web pages
Hypertext	text on a Web page that contains links to other Web pages
Internet	the global computer network that connects millions of computers
ISP	<i>Internet Service Provider</i> ; a company that provides access to the Internet through a phone line
Netiquette	rules of conduct for Internet users
URL	<i>Uniform Resource Locator</i> ; the address used to locate a specific Web page
Web Page	a document stored on a computer that contains information and possibly graphics, sound, and even movies
Web Site	a university, government agency, or company that stores Web pages that you can view
WWW	World Wide Web; an Internet system that offers vast amounts of information

Netiquette

Netiquette is the accepted rules of conduct for Internet users. If you are going to use the Internet, you need to be aware of these rules:

- Always remember that there is a person at the computer on the other end.
- The Internet is not private. Do not type anything that you would not show your boss, your teacher, your principal, or your grandmother.
- DO NOT TYPE IN ALL CAPS BECAUSE THAT IS CONSIDERED SHOUTING.
- Always complete the subject line when sending a message so that the receiver can identify your subject.
- When responding to a message, state what you mean. Avoid just yes or no responses.
- Do not ramble on with your communication. Stay on the subject at hand.
- Never write put-downs. Respect others and their viewpoints.
- Do not copy other people's messages without their permission.
- Avoid obscenities or any offensive language.
- Be careful with humor; others may not be able to tell when you are "just kidding." Use a "smiley" [:)] to show you are kidding.



Activity Assessment

Activity:

Criteria	3	2	1
Depth and breadth of research	offers accurate analysis of the major and minor issues surrounding the topic; uses three or more references	relates major facts to the basic topic with fair degree of accuracy; uses two references	provides only minor facts basic to the topic; inaccuracies; uses only provided information (text) as reference
Application of knowledge	demonstrates in-depth understanding of the topic; accurately employs all parts of the information	demonstrates general understanding of the topic; employs most parts of the information with fair degree of accuracy	lacks understanding of topic; employs only the most basic parts of the information; several misconceptions about the topic
Written/Oral communication	presents a well organized presentation; message is easily understood	presents a somewhat organized presentation; message is vague	presentation is unorganized; message tends to wander or ramble and hard to understand
Creativity	imaginative, self-initiated finding and use of resources; extensive originality in presentation	considers provided materials; demonstrates adequate originality in presentation	lacks initiative when finding and using resources; lacks originality in presentation

Self-Reflection: On the back of this sheet, write a paragraph that describes how you can use knowledge gained from this activity in the future.

Adapted from Family and Consumer Sciences Education Association (1994). *How do we know they know?* Publication# A261-08482 ISBN 0-911365-35-4 . . . Copies Available: FCSEA, Central Washington University, 400 E 8th Avenue, Ellensburg, WA 98926.